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ABSTRACT

Investigation of the influence of schooling on cognitive development and its resulting attitudes toward social change in Pakistan provides insight on national development. Pakistan's rural geography, well developed class system, legacy of colonial rule, and strong family and religious traditions make it a particularly good subject for development research. Researchers, however, are often guilty of imposing a Western point of view of non-Western societies by combining myth and wishful thinking with valid observations of and knowledge about developing nations. The research project is based upon the hypothesis that education and training are the keys to progress and development in rural areas. A value free test and interview instruments were used to measure the effect of schooling on 100 Pakistani adults, 80 out-of-school children and 114 school children. Three tests (multiple ordering, similarity, and learning and ordering) were administered to the groups to measure the cognitive aspects of their problem-solving abilities. Interviews concerning attitudes towards change and belief orientation followed the tests. Findings showed that response patterns vary by education and literacy more than by age; schooling has a noticeable effect on cognitive growth but not on social behavior; and additional schooling prompts individuals to suggest socioeconomic reform. References and survey tabulations are included. (Author/DB)

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Gothenburg October, 1976

## ON COGNITION AND SOCIAL CHANGE

A report from a pilot study regarding the effect of schooling on cognitive growth and attitudes towards social change in Pakistan.

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## INTRODUCTION:

### On cognitive growth and social change

Development is a concept on a high level of abstraction. It refers to change. But all changes are not considered developmental changes. Hazardous shifts, erroneous action and random behavior are rather the opposite to developmental growth. So - the concept also refers to stability. Developmental changes are sequential changes leading up to a more efficient way of dealing with environment. The process of development must ultimately be understood in terms of equilibirum between the acts of individuals and the resistance encountered from the surrounding environment. It is a dialectic process.

Development has no substance in itself. There is no such thing as a development. You can not see it. You can not touch it. It must be expressed through a medium with an extension in time and space and recognized through acts and comprehended in a time perspective. The process of development is a mental construction. It is a pattern that is imposed on - and deducted from the everchanging scene of interacting individuals. As a recognizable pattern of growth it has a dual origin. It is partly born in the eye of a knowing subject by a process of singling out what is understandable and partly it is formed as a consequence of properties and relations in the observed object. The body of knowledge concerning development is therefore the joint product of knowledge and myth, valid observations and wishful thinking.

Personal knowledge is a spreading out of what is relevant to act upon - with or against. There is testing ground for human conduct. In this process new oppositions and contradictions are created in the context of every day life. There will be different points of view concerning what is relevant to unite and tell apart, what is real evidence and what are idiosyncratic beliefs. A diversity of criterias of truth and standards of behavior will be posed against each other as mechanisms of adaptive change in the medium of human acting and comprehending.

This diversification process produces its own limits of expansion. Whatever points of view that are upheld, shared or disputed will manifest themselves in actions with social consequences. Every human act is taking part in the constructions of the material base for survival and co-existence. Individual points of view and actions are not independent of the living conditions they produce for society as a whole.

The pressure for unity in standards of behavior and in basic criteria of truth emanates from the real-hardware-conditions of life. But unity can not be reached in the same medium where it produces contradictions and opposing points of view. Hardware conditions of life in terms of inequality, poverty, exploitation, starvation, alienation etc will not in themselves settle the questions of opposing points of view concerning human conduct.

In the context of human action the question of human conduct and basic truth will be a practical matter of finding a basis for truce and joint action.

What is good and bad human conduct and what are basic criteria of truth must be pursued in a medium where these questions can be fruitfully tackled.

Qualitative differences in living conditions and contradictory human convictions taking shape in opposing actions enforce the problem solving context of abstract thinking and objective knowledge.

In this domain of values and comprehension opposing points of view concerning standards of human conduct and criteria of truth are transferred from the level of personal conviction, to the medium of objective knowledge.

Objective knowledge does not imply any absolute or pure knowledge. It stands for a problem solving process emtied of human conviction. The logical strength of an argument can not be invalidated by human strength and enforcement. The criteria of truth are transferred from man to method.

Life is always lived. There is action and reaction in every second, on all levels of existence from amoeba to man. Pressure and counterresistance shape and mould sequences of action into that stream of action which is experienced as life.

A man can live this life with success, he can master the environmental pressure, he can bend to circumstances, he can take on challenges and show competence - without making this chain of action an object of knowledge. This does not mean that he is not thinking of what he is doing. He will most certainly be reflecting over mistakes done, calculating to overcome difficulties, be cunning in planning for the future, showing foresight etc but all these actions and all this thinking can be done in the context of human action.

Knowledge is then tightly bound to action. Knowledge and experience breed more efficient strategies for survival and coexistence. The center of knowledge and action is to overcome or improve the actual situation. The criteria for truth are embedded in the factual conditions of life. Their validity is based on tacit knowledge of what is possible to do in terms of human love, passion, mercy and despair under the conditions given.

To convert this stream of action into an object of knowledge one is forced to retreat from action in the present into reflexion over action in the past. - (This is basically what an intellectual attitude stands for.) In this process the flow of life is "frozen" into units of action. Any sequence of human behavior is splintered into many discrete units of actions. Every such unit has an internal centre and all other units are external to it. Every act that relates man to man into purposeful human behavior takes on different meaning depending on what perspective - what centre is used as starting point for observation.

In this process of knowing - truth as we experience it in life is transformed from the context of human facts and actual experiences into the realm of impersonal, possible, multidimensional relations - or abstract relations.

In abstract thinking the criteria of truth will loose "human substance". The actual is dissolving into the possible, the one dimensional is giving way to the multidimensional, human conviction is transferred to impersonal uncertainity. In making life and development an object of knowledge man has partitioned what his eye deems indivisible and united what his experience tells apart. Split-vision-like he has been forced to oscillate between the factual and the possible. This process of knowing has its root in the factual and in the possible. Factual may in a broader sense stand for the actual - conditions of life and possible for the striving to overcome the hardships and challenges in survival and co-existence.

The way man understands himself and the world he lives in - the way he acts and adapt to circumstances - is always a joint product of his living conditions and of his comprehension of what is possible and what are "real" restrictions (May they be called Will of Allah, fate or chance).

But the process of knowing has also a necessary direction born and nurtured from within. The logic, in which the questions are posed produces new ways to comprehend in opposition to what has happened before. New and unforseen contradictions will take shape in society when planning and decision from this new way of comprehending will be implemented in the context of human action. They exist in the tangible form of poverty among richness, being or not being exploited, having or not having influence on the conditions of life etc.

The main instrument for pursuing knowledge by uniting and dividing in the realm of abstract thinking is the use of concepts and symbols. In every day life - in the context of living. Concepts and symbols name functional units or units with an individuality. For all practical purposes functional units are well defined in the context of action. A harbour is not mixed up with a barbershop in the course of every day action. Books are not mixed up with bricks - nor food with bridges. By mistake you can kick a stone instead of a ball. And you will know that it was a mistake in the act of kicking. Even if every unit takes on many shapes they have well-specified functions. In the medium of action concepts stand for well defined discrete units. Units with individuality are named for their uniqueness. They exist as distinct entities. There is a man called Idi Amin, a town called Tokyo, a son called Sven. They exist as personalities or specified entities whatever constallations of functions they express or carry out. They are loved or disliked, ignored or envied in their capacity of existing and being what they are.

In abstract thinking analysis takes place in the medium of concepts and symbols. In this process new concepts are generated and used which do not have any well defined meaning. The phenomena they name does not exist at all as observable, discrete units in the real world. One way to get around this is to use operational definitions - like intelligence in what intelligence test measures - but this procedure belongs totally to the region of abstract thinking.

This quality does not make abstract concepts useless. The very quality of not being filled with definite meaning - makes them into instruments of thinking. Being transparent - devoid of absolute meaning - you can think through them - order and reorder that which is constantly happening in front of and behind your eyes.

But through language and use of concepts our thinking is cast into a mould which gives more pregnant contures to the model of reality we comprehend than reality itself displays.

Concepts denote relations and units in the context of abstract thinking. They are instruments for uniting and dividing continuous life into a comprehensible pattern.

Learning is an individualistic process. As a consequence there will be variations in scope, span and perfection in the attained skills among individuals. The process of learning is open for chance and error. What you learn is to a high degree dependant on the social context. The learning process enchances variations in the form of individual differences. Variations in skill, knowledge and intentions are the backbone of adaptability for the group as a totality but it also contains the seeds of inequality of man and of social injustice.

But on the other hand to have to learn a competence is coupled to certain advantages like the ability to forget and the capacity to change. Development is - by the mechanism of learning - transferred from the time perspective of evolution and the domain of species to the time table of generations and the context of cultures.

Forgetfulness - the cursed blessing - is on the level of species an alternative to stagnation and extinction. Habits that prove functionally a disadvantage do not need to persist - they can change through learning and un-learning. On the level of the individual - errors in the medium of thought and action - can be altered and improved when unsuccessful or infertile.

Man has always learnt from man. The origin of man is social. What is human is learnt from humans. But the learning process is open for chance and error. Its very nature is non-deterministic. In very uncomplicated societies - the skills to be mastered - are endlessly ongoing activities - you can not help but learn them as a part of growing up.

The more evolved a society becomes in terms of technology and production capacity the more outspoken becomes the need for division of labour. The development of a society based on technology is an exploitation of the variation in capacity among its members. But it also produces variation in ability and basic attitudes among the individuals due to division of labour and the accompanying differences in life experience.

The more technically advanced a society becomes the more vital it will be to widen the scene of community and raise the threshold of shared knowledge. It is not possible - in terms of adaptive change - to entrust the growth of social capacity to an individualistic learning process. There must be some garanties of shared basic competence and attitudes. Formal education is an instrument for adaptive change of social systems. It is a social invention with its basic function in curtailing the effects of hazardous, accidental learning. It is a method of decreasing the span of variation in intellectual ability, upheld belief and social capacity.

The implementation of schooling on nationwide base is a rather recent occurence. In large parts of the world it is still a feat to be mastered.

Schooling is a man made context of learning where the heterogeneous learning from life is turned into a pattern of homogeneious learning situations that mirrors life.

The structure and content of schooling are dependant on structure of society. Questions concerning what is valid knowledge and handicapping ignorance, what is basic skills and desired attitudes and questions concerning how many - and how long - have ultimately been decided in a context of economics, power and politics.

The hierarchical structure of school, the process of evaluation of outcomes, the content and structure of curriculum, the educational mechanism of selection and control, and what is excluded and ignored in the patterned learning is a part of societies structural composition.

Learning from life is unquestionably meaningful. Action purpose - reason is a totality, it is life itself. You do not question why you should learn to sow and harvest if you live from the product of your actions. Learning from education is not necessarily meaningful in the same way. It can be - of course - but there can also be a contextual separation between the act of learning and the reason and purpose for doing it.

In education a new level of internal consistency can be reached between the act of learning and the purpose for it in the nexus of knowledge produced by learning and the structural mechanism of selection and control. As a consequence of this relation people in education can be busily doing things which they do not see the point in. The process of learning has then become an act in itself and the obtained knowledge a thing in itself. Knowledge - and the process of learning can be valued and evaluated quite apart from its relation to every day life.

I said before that education is man made context of learning.

It would perhaps be more adequate to say that it is a mind-made context of learning. The educational reality is verbal and symbolic. It is not reality itself. It represents reality in the medium of symbols.

Learning from life is a way to be. A good farmer is a man that acts as a good farmer and the act of a good farmer produces a good crop. Producing a good crop is reality base for calling anyone a good farmer. Learning from education is a way to know. A good pupil produces valid knowledge according to certain standards. What is valid knowledge is determined from "educational reality test".

In what dimension is cognitive growth comprehended in the Western culture? What content and what structure is changed in the process of cognitive growth?

The common denominator for these different models of cognitive growth is the principle that the more well-developed or talented an individual is, the greater the extent to which his cognitive actions are conceptually logically organized and rational. Thinking operates at a level of reality which is beyond that which can be seen, heard, or touched. Common-sense phenomena and the relations between them are transformed into conceptual categories and grouped by logical relations. The process is rational in the sense that it is free from subjective interference.

In a general sense there is a wide area of agreement between this model of aptitude and the imposition of order on the environment which Western scientific thinking represents.

But in a wider perspective we must consider the social context in which cognitive development takes place.

Comparative cultural studies based on Piaget's methods (Maccoby & Modiano 1967, Greenfield, Reich & Olver 1967, Hyde 1970, Cole et.al. 1971) as well as more detailed analyses (Horton 1971, Bruner 1971, Lévi-Strauss 1971) indicate that cognitive development proceeds in differing directions depending upon differing living conditions and related traditions and values within different cultures. I find of principal interest that the socio-centered and the conceptual-analytical model of thinking seem able to reach parallel levels of complexity and organization depending on different socialization processes.

In the African cultural tradition an individual's actions are evaluated primarily for their social effects. ("Collective value orientation"). This means that a manifestation of competence has no inherent value when disengaged from the social effects in which the behaiour results. Individualism in terms of thinking and acting from ones own point of view in through patterns of upbringing, systematically repressed to the advantage of the collective unity. Thus children under two years of age are treated as fully mature personalities and allowed to fulfill their own intentions and desires, whereas the socialization process after this age is successively aimed at suppressing the individual to the advantage of the collective.

Against this basic values orientation we can compare the Western cultural circles' emphasis on individualism. ("Individual mastery orientation"). Accomplishments are evaluated primarily from the point of view of effectivity and competence. This evaluation of behaviour increases in proportion to age.

Vernon (1969 p. 363), too, considers that the major difference in African and Western intellectual development depends upon factors in the socialization process.

"But the major differences between African and Western intelligences probably arise from the emphasis on conformity and social integration as against individual responsibility and internal controls; and from the acceptance of magical beliefs which inhibit analytic perception and rational thinking".

Bruner pins down the turning point, that is the moment at which one of these lines of development becomes decisive, very early in the child's life.

> "Thus adult interpretation of the child's first actions would seem to be paradigmatic for the choice between an individualistic and a collective orientation; for a social interpretation of an act not only relates the actor to the group but also relates the group including actor, to physical events. When, on the other hand, acts are given an interpretation in terms of motoric competence, other people are irrelevant, and the act is separated, moreover, from the motivations, intentions, and desires of the actor himself". (Bruner 1971 p. 32)

Robin Horton (1971) has, in a thorough comparative analysis of Western scientific and African traditional thinking, pointed out the structural parallels in these cognitive approaches. In agreement with Bruner and Vernon he notes the characteristic value orientation in the African system.

> "Now most African cultures have adopted a personal idiom as the basis of their attempt to understand the world". (Horton 1971 p. 213)

He emphasises the connection between the basic value orientation and the differing models of explanation which have developed within the two cultures, that is, the rational versus the magic, as seen against the background of the invariant aspect of the total system, that which is established and predictable.

> "In complex, rapidly-changing industrial societies the human scene is in flux. Order, regularity, predictability, simplicity, all these seem lamentably absent. It is in the world of inanimate things that such qualities are most readily seen! This is why many people can find themselves less of home with their fellow man than with things. And this too, I suggest, is why the mind in quest of explanatory analogies turns most readily to the inanimate. In the traditional societies of Africa, we find the situation reversed. The human scene is the locus par exellence of order, predictability, regularity. In the world of the inanimate, these qualities are far less evident. Here, being less at home with people than with things in unimaginable. And here, the mind in quest of explanatory analoties turns naturally to people and their relations". (Horton 1971 p. 224)

Using differing living conditions as a point of departure, they have within these cultures, shaped qualitatively differing models for the description and explanation of reality. The models differ qualitatively with respect to which aspects of reality are the points of departure for construction of models of explanation. Thus they are separate logical systems, that is they employ different modes of categorization, organization, and explanation of reality. Yet the cognitive approaches which lie behind the development of these systems appear structurally identical to the extent that they are based upon a process of abstraction which has generated theoretical realities, i e powers and concepts, which explain tangible reality.

"Many writers have considered this sort of abstraction to be one of the distinctive features of scientific thinking. But this, like so many other such distinctions, is a false one; for just the same process is at work in traditional African though". (Horton 1971 p. 225)

Levi-Strauss (1971) also emphasises the structural parallels in the mental operations which lie behind science and magic; two wholly separate systems as regards practical consequences and theoretical content.

"Magical reasoning is not a beginning, an introduction, an attempt, or a part of a whole which has not yet been realized. It builds a well-developed system and in this respect it independent of other systems which science has built, with the exception of formal analogy which draws them together and makes magical reasoning a sort of metaphorical expression for science. Instead of setting magic and science against one another it would therefore be more appropriate to arrange them in a parallel fashion, as two forms of knowledge which differ with respect to theoretical and practical results (since from this point of view it is correct to say that science is more successful than magic although magic is an earlier form of science in that sense and also succeeds at times), but not as regards the sort of mental operations which are prerequisite to both and which differ less as to their nature than as to the sort of phenomena upon which they are applied." (Levi-Strauss 1971 p. 25)

Against a background of the aforementioned opinions, it ought to be mentioned that one cannot judge these two thinking systems by one dimensional standards. They each represent a system of logic anchored in its own system of values. The analytic non-social cognitive model of reasoning does not in an absolute sense represent the "natural" and state of conceptual development. It is a phase or stage in one of a number of alternative lines of development which are anchored in a social context.

An enlightening example in this context is Kenneth Kaunda who, in his twin capacity of African stateman and Western humanist must, in his everyday life, operate in the border zone between these two systems of logic.

In his book A Humanist in Africa (1969) he takes up this issue and evaluates the two cognitive systems with consideration to their differing practical consequences in politics.

"There are surely those who would maintain that all I am saying is that the African people are still primitive and need education to learn Western ways of thinking. I most definitely contest this viewpoint.

Neither do I think it necessary that our people must choose between different systems of thought in a sort of either-or. It is obivous that there are areas of activity in which the problem solving attitude is the only conceivable one. There is not an African and a European way to balance a budget or split an atom. There is simply a correct way and an incorrect one. The laws of science and economy must be obeyed and if one is subject to a time-factor the technical possibilities of the scientific method must be exploited. But as concerns human relations, about which I am on the first hand speaking, I should like to maintain that the African attitude is both clearly richer and more human. It absolutely avoids the danger of treating people as things.

This is not simply theory. Each day of my life I meet the necessity of making difficult and important decisions. The process of administration and decision-making follows a certain pattern all over the world. But I am often conscious of an extra dimension in a problem which occupies me to such an extent that a European official standing beside me and waiting for my decision might conceive that I was complicating a question which to him appeared simple and clear." (Kaunda 1969 pp.28-35)

What from a Western point of view complicates the decision-making process is that "the African society has always had the individual at its center", and this leads to Kaunda's central practical-political position: "It is more important for us that government is individual-oriented than that it is effective."

The practical successes in which the analytical non-social cognitive model has resulted are tangible and incontestable. Yet effectiveness has its price.

Western efficiency is a consequence of a high level of specialization in understanding and describing the environment according to this basic orientation. More and more intangible abstractions with greater and greater explanatory value have been incorporated into the theoretical model of the individual and his environment. In a parallel manner, description of the reality in which we exist has been dislocated beyond individual and social relations. The criteria for determining what really exists are insubstantial and are accepted by virtue of having proven themselves effective in transforming the practical conditions of living. The obvious manifestations and expressions of the true level of reality are less real by virtue of the fact that they are variable and that variability can be explained by the basic phenomenon.

When the analytic cognitive approach is fully developed within a social system to such a degree that the basic value orientation colors jurisdiction, administration, developmental planning, education, and control of the means of production, then the risk for dehumanization arises. It is only from this cognitive approach that is, for example, logically possible to establish a correspondence between individual and number, between work and productivity, between time and money, - or to express - enjoyment and happiness in terms of standard of living and to measure effectivity within a narrow product-oriented frame of reference. Alternately, there is no logical contradiction in a relationship where high aptitude as we have defined it can be coupled with social insensitivity.

It is within, not beyond, this cognitive approach that we have formed our Western instrumental view of the individual. We can derive from it our model for intelligence and our tangible criteria for selection and prediction.

What is mature thinking? What is the direction and dynamics of intellectual growth? What is the special quality that distinguishes highly developed thinking from childish thinking?

To these questions there are many answers. Any answer based on developmental research is time-bound and culture bound. Any cross-cultural study with the aim of comparing modes of thinking in different cultures is bound to contain partially correct answers and conclusions. In the process of comparison one compares from some point - i e from methods and standards.

The methods of questioning and the standards of evaluation are expressions of deep seated convictions about what good thinking really is.

These convictions are "invisible", that is they are part of the cultural setting and the intellectual structure which generates the questions and the criteria for judgement and comparison. This dominant creed is both behind and in front of our eyes - it makes us see, comprehend and act. In this respect there is no difference between missionaires with their method of salvation and eternal happiness, businessmen with their method of commerce and development and the scientist with his method of abstract thinking and objective truth.

The concept of intelligence is modelled on scientific thought. Basic tests and instruments tap that abstract thinking which has given us the most profound knowledge of the world we live in. Scientists are the people who more than any other group represent this type of knowing and thinking.

The paradigm of intellectual growth pictures a continous structural reorganization of intelligence. Constant concrete actions in the limited realm of reality are transformed into the ability to deal with contentfree symbols in the infinite realm of the possible. The mature intellect is not burdened with transitional errors of reasoning. Problem solving, decision-making and planning are not invalidated by "harmoniously" co-existing contradictory points of view, which originate in different levels of thinking.

The implicit assumption in the model of intellectual growth is that problem solving reaches its peak in the domain of abstract thinking. By this special kind of uniting and dividing, by this kind of construction and testing of abstract models - problems will be solved and answers will be reached that are more valid in all forms of human conduct than answers obtainable in any other way.

It is obvious from this perspective that one needs a yardstick other than abstract problem solving to measure and understand non-western thinking. In principle this must be done from "within". It must be done by members of the culture who can understand "in their bones" the nexus between ordinary every day thinking and acting and the refined thinking and acting which grow out of this context and reach maturity.

The form and structure of this mature way of thinking and acting can be overwhelmingly different from "western-scientific-thought". This body of knowledge is represented in the thinking, writing and actions of those persons who can give answers to the questions that really matter in that culture.

To make my point clearer I quote the following passage from Krishnamurti (1973 p. 85) where he argues against concept formation as a way to knowledge. This quotation can shed some light on the difference between the western and eastern intellectual growth process.

"Do I have to have a concept of non-conflict before I am aware of conflict? I know what conflict is - the struggle, the pain. Don't I know that, without knowing a state when there is no conflict? When I formulate what is good, I will formulate it according to my conditioning, according to my way of thinking, feeling, my particular idiosyncrasy and all the rest of my cultural conditioning. Is the good to be projected by thought? - and will thought then tell me what is good and bad in my life? Or has goodness nothing whatsoever to do with thought, or with a formula? Where does goodness flower? - do tell me. In a concept? In some idea, in some ideal that lies in the future? A concept means a future, a tomorrow. It may be very far away, or very close, but it is still in time. And when you have a concept, projected by thought - thought being the response of memory, the response of accumulated knowledge depending on the culture in which you have lived - do you find that goodness in the future, created by thought? Or do you find it when you begin to understand conflict, pain and sorrow?

So in the understanding of 'what is' - not by comparing 'what is' with 'what should be' - in that understanding flowers goodness. Surely, goodness has nothing whatsoever to do with thought - has it? Has love got anything to do with thought? Can you cultivate love by formulating it and saying, 'My ideal of love is that'? Do you know what happens when you cultivate love? You are not loving. You think you will have love at some future date; in the meantime you are violent. So is goodness the product of thought? Is love the product of experience, of knowledge?" (Krishnamurti 1973 p. 85)

How can thinking vary between cultures and subcultures? Is not the process the same even if the content varies according to life conditions? Is not thinking the functioning of the brain, i e an intellectual process based on symbol formation and the formation of abstract relations?

Thinking is partly an intellectual process. There is something going on inside the head of an individual. This process is concerned with abstract relations, and the formation of models of the world in the medium of concepts and symbols. It is only in this respect that thinking is a non-tangible intellectual process.

From the perspective of growing up and maturing i e leaving behind childish ways of comprehending and acting - thinking is action. Thinking is an ongoing process of probing and checking, of acting out questions and answers, of exploration and experimentation.

This tangible form of thinking is as much a part of the cognitive growth process as the intellectual, invisible part.

In the probing, active aspect of thinking one learns not only what - but in what way it is culturally acceptable to think in the conceptual domains. In this way social control is embedded in the very structure of thinking.

The intellectual aspect of thinking can never be understood and evaluated as separate from the social and materialistic context in which it has grown.

From this point of view it is imperative to know the final state of cognitive growth in the specific culture in order to be able to study the process of growth. Greenfield argues for such an approach:

"Ideally, development in non-western societies should be studied by members of the society itself. That way, the ideal type is a living reality rather than merely a theoretical abstraction, just as the model of the Western scientist is a living reality for Piaget, informing all his work." (Greenfield 1973, p. 6)

Needless to say, studies done from "within" by people educated and influenced by Western ideals can be as foreign to the cultural setting as if they were done by inhabitants from another culture.

## The general rural, socio-cultural background of Pakistan

About 75 % of Pakistan's population of 75 million live in the villages and around 55 % of the labour force is engaged in agriculture. The cultivated area is about 47 750 000 acres or 24 % of the total available area.

The current pattern of the society and the prevalent system of ownership have evolved over a long period of time.

The original factors determining caste were a combination of geographic origin and previous Hindu caste status. Other later factors are landholding and occupation. Land is the major source of both income and "izzat" or prestige, since a landowner with large holdings has more tenants and moeens (Kammis) working for him and depending on him. He can therefore command more people and command with more respect, and in this way he increasingly acquires power, influence and prestige (Eglar 1960).

On the one hand ownership of land places on the landlords certain responsibilities toward the people with whom he has established a relationship. The generosity that the landlord is expected to display at times of marriage, birth, death etc. is closely connected to other kinds of property, like food, fruit, sweets etc. The more he gives, the more "izzet" - prestige, honor and status - he gains. As the Punjabi says: "One collects either property or "izzat". However, he might share food and money but not land because that is the source of his "izzat".

Distinct rural classes have emerged and their differences are based on their respective tenure statuses. These classes are the landlords, the peasant-proprietors, the tenants and the agricultural workers.

Landlordism in Pakistan is the legacy of British rule. The landlord or Zamindar, occupies the top position on the social ladder. Next in the socioeconomic hierarchy comes the peasant-proprietor. Unlike the big landlords, he owns small areas of land which he cultivates himself with the help of his own family or of hired labour. The tenant, who comes next, has no permanent interest in the land which he cultivates on the basis of rent. At the lowest rung of the ladder stands the casual agricultural labourer.

Besides agriculture the village community is sustained by a number of other professions. Rural business which does not usually go beyond petty shopkeeping and retail selling ranks next to agriculture as a distinction of prestige. This is followed by government service. Even petty revenue officials, the lambardar and the patwari, enjoy considerable prestige and reputation in the village. The village teacher (muallim) and the priest (maulvi) also command the respect and esteem of the rural population. Their advice is sought and valued in the affairs of everyday life.

The provincial village communities also include small numbers of such craftsmen as blacksmith (lohars), fishermen (mahigheers) barbers (nais), washermen (dhobis), cobblers (mochis), and village bards and musicians (mirasis). These craftmen,by providing skilled services locally at cheap rates,play quite an important role, for owing to the poverty and poor-communications media each village must of necessity be largely self-sufficient in all essential goods and services.

The uneven class structure is often reinforced by the various "seypis" or contracts by which the ("hammis") craftsmen and the labourers and sweepers are linked to different landlords and rich farmers. According to the "contracts", the craftsmen are paid differently; for example at occacions of birth or death the barber might receive 25-35 rupees, and the cobbler 50-75 rupees, while members of the poorest class, the temporary labourers and sweepers, only receive 3-5 rupees. Thus, this system does both increase inequality and poverty and prevent the prestige and increases the "generosity" of the rich farmers and it is not easy to change one's occupation.

Although women and children share considerable professional responsibilities with men, women essentially remain less preoccupied with field work and more concerned with child care nursing, cooking, spinning, sweeping, and other domestic chores.

The family is the basic social and economic unit in rural Pakistan, It continues to retain its preeminence as the most vital bond of human association. The common family pattern is patriarchal.

According to a farm census in 1963-64, 63 348 landlords, (1,25% of all the landowners)owned more than 100 acres of land or 15 162 480 acres all together i.e. 31,2 % of the total acreage under private control. In certain areas such as Punjab and Sind, landlords posessing more than 500 acres owned more than 50 % of the arable land (Myrdal 1968, p. 309)

According to the same census data the rich farmers (5,6 % of the total number of landowner) owning from 25-100 acres, possessed 10 616 308 acres or 21,9 % of the total acreage. The poor farmers, owning less than 5 acres, constituted the major part or 64,5 % of all landowners, but together their 7,4 million acres of land only made 15,3 % of the total acreage. Over 750 000 own less than one acre and therefore have to work for others to earn enough to live. (See appendix 1a).

In 1963-64 there were more than 2 million landless farmers in West Pakistan. They lease the land and together they cultivate around 50 % of the arable land in West Pakistan. The landlord gets the major part of the yield and the rest the tenant sells in the local market which very often is dominated by the local landlord who buys the raw material and from him the farmer has to buy the more expensive ready-made products.

In 1959, under land reforms, some 934 450 acres of cultivated land was resumed and sold to tenants and small owners, but these reforms benefited only about 59 500 persons and they, too,had to pay the prices for the land acquired by them. The maximum ceilings on landownership were also as high as 1000 acres of non-irregated and 500 acres of irrigated land.

Under the new reform from 1972 the ceilings have been lowered to 150 acres of irrigated and 300 of non-irrigated land.

So far 724 000 acres of land have been resumed from 7 000 landlords and been distributed free to about 14.000 farmers. Still, this is only 4,8 % of the total acreage of the landlords. Therefore certainly no revolutionary change in the social structure has taken place. Considering that out of 138 directly elected members of National Assembly no less than 105 are landlords, and that landlords have captured all seats from rural areas, naturally a fundamental change in the rural class structure will not be initiated from above.

When it is a question of analysing "the village socio-economic structure which is the framework for the rural school," (original project proposal p. 10) a survey of the land distribution on the numbers of households is most necessary in order to reveal the existing concentration of ownership.The percentage distribution of crops by different area planted and the distribution of the net return on different households is additional information necessary to cover the economical base for the socio-cultural structure. As there quite frequently is a difference between the official revenue statistic and the actual situation there is a need for interviews and proper surveys in order to get an adequate picture of the prevailing circumstances.

Religion plays a significant role in peoples lives. The majority are Muslim. Islam is so intimately interwoven in the lives of the rural population that it is a way of life to them. People pray, keep the fasts, read the Holy Koran, offer zakat (the compulsory charity), go on pilgrimage (Hajj) to Mecca when they can, and observe the various religious festivals with devotion. Religion is a basic source of solace in crisis and emergencies. God (Allah) is never against them

"He knows best". "It is the will of Allah". At time of death, they mourn, but never fell that the death was a punishment from above, for "Allah knows what is best for us".

The modes of upbringing, processes of socialization, forms of realization of self and interaction of factors of personality formation are found within the philosophy of Islam. And what cound be called "an average person" in Pakistan, "shows the patterns of learned behaviour that falls within the jurisdiction of religious sanctions" according to Chaudry (1966 p. 78).

The people in the villages usually share certain beliefs and values based on religion and folklore. They believe in supernatural beings and superstitions (Fayvaz 1964). They believe in ghosts (Jons), male (Bhootne) and female (Charel) demons. Grave-yards, shady corners and old wells are the places where they are supposed to dwell and if they are disturbed they put a person under their spell. Only certain people can cure them then.

The people in the villages are often convinced that a soul which is to be born is pre-ordained and cannot be stopped by any human methods. The food the child is to consume will be provided by God. People who suffer in the name of religion will be rewarded. Future events are all regulated by God and the freedom of choice of individual human beings is rather limited.

## Previous research on primary education in Pakistan

The conclusion from our previous research on primary education in Pakistan (1973) was that the main obstacles to implementing universal elementary education were the heavy drop-out phenomenon and the shortage of primary teachers trained for and willing to work in rural areas.

The effect of the drop-out rates is that only about 50 % of those who entered the first grade remain in the fifth grade five years later. The over-all approximate picture of the current situation as regards the enrollment ratios at the elementary stage is given in figure 1.

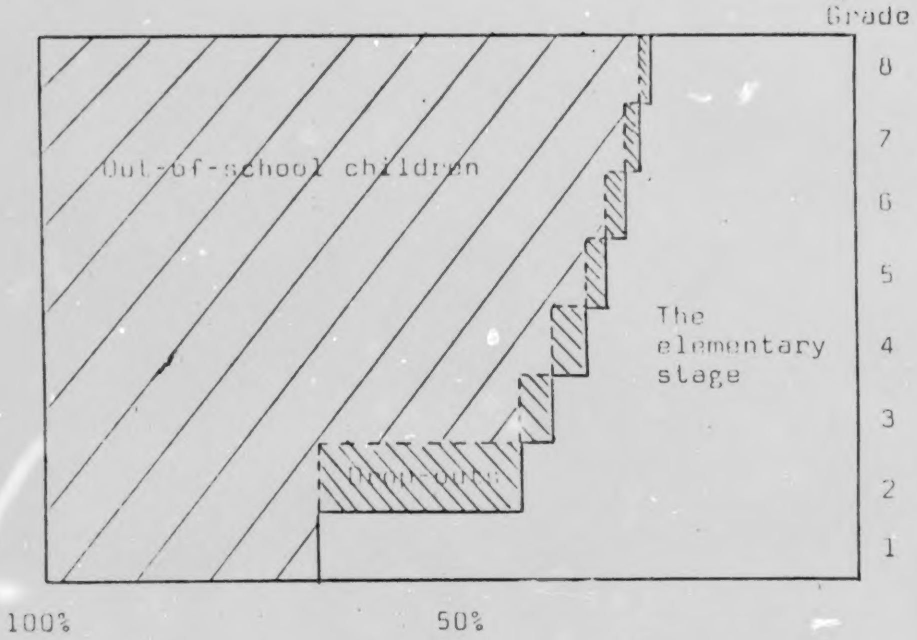


Figure 1 Proportion of the age-group enrolled at the elementary stage in Pakistan

Source: Åsberg 1973. The Educational Policy 1972-80

The figure shows that out-of-school children still constitute the major portion of the respective age-groups, except for the first grade.

When we interviewed the parents of 259 families in the Lahore region (including approximately 880 drop-outs) about the causes of their children leaving the school, most of them stated poverty, child labour, and their own illiteracy as the most important reasons.

As regards illiteracy about 75 % of the population in Pakistan is illiterate and out of those 90 % is concentrated in rural areas. In figure 2 we have tried to summarize the available data (see Åsberg 1973, p. 165) by constructing the age education profile for Pakistan which shows the levels of educational attainment of the whole population.

Figure 2 shows that the illiteracy rates increase with age. School children having illiterate parents is obviously rather common. The educational profile also gives an idea of how different degrees of education (in years) is distributed over

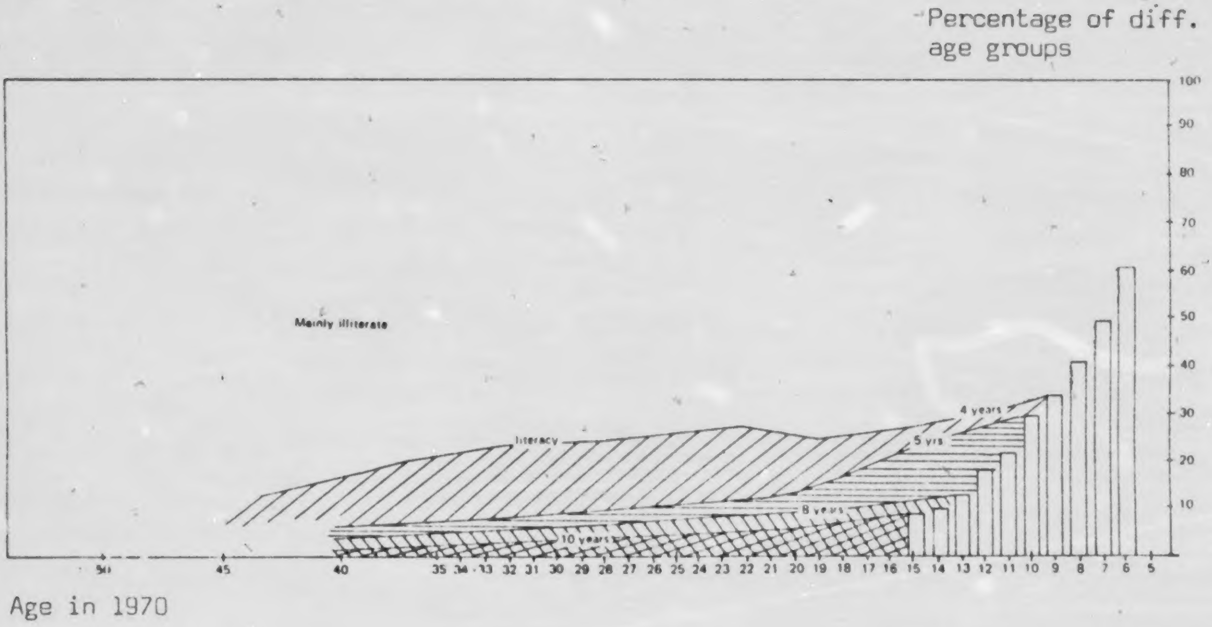


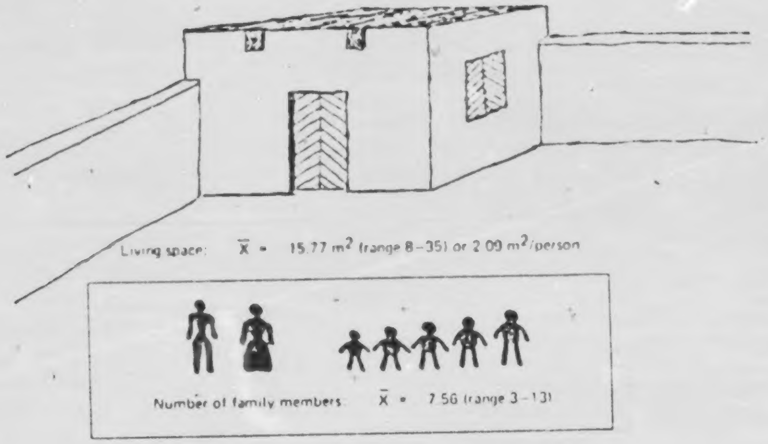
Figure 2 The age-education profile of the total population of Pakistan

the age groups and therefore provide us with some useful background information as regards the adult subgroup in the pilot study.

As an attempt to reveal the hard facts behind the concept of "poverty", the families who gave that reason for their children dropping out were interviewed about their income per month, living space, rent and number of family members. The "average family" is presented in figure 3.

The information from figure 3 is from 1972. Since then the Pakistani rupee has been devaluated by 50 %. In addition to that there have been rather high inflation rates the last two years. Making the same investigation among the same people today would approximately double the income figures. This does not mean, however, that the living standard has doubled, since prices also have increased considerably.

Naturally only a few unimportant causes of dropping-out can be found, and influenced by measures within the educational system. The crucial causes are to be found within the socio-economic sector and therefore they can be effected only by changes within this sector.


Living space: $\overline{X}$ = 15.77 $m^2$ (range 8–35) or 2.09 $m^2$/person
Number of family members: $\overline{X}$ = 7.56 (range 3–13)

| | |
|---|---|
| Father's income: | $\overline{X}$ = 96.07 Rs/month (range 30–200) |
| Mother's income: | $\overline{X}$ = 36.52 Rs/month (range 15–90) |
| Family income: | $\overline{X}$ = 118.18 Rs/month |
| Rent/month: | $\overline{X}$ = 16.63 Rs (range 5–30) (only 22% of the families paid rent) |
| Money for consumption (after rent has been paid) per member: | $\overline{X}$ = 13.43 Rs/month or 0.45 Rs/day (1 rupie = 12 cents) |

Figure 3 A profile of the "average family" giving poverty as the reasons for their children dropping out from school

The other crucial hinder toward implementing universal elementary education, as soon as possible, is the supply of teachers, and the city versus village issue. The main obstacle is the negative attitude towards the rural life, which is reinforced by the current training. This creates a situation in which many trained teachers prefer to stay in the cities as unemployed rather than move to the villages and work there as teachers.

Both of these obstacles to the expansion of the elementary stage of education emphasize qualitative aspects within the educational framework as well as the need for changes in the socio-economic environment and the relationship between this environment and the process of ongoing education in the schools.

From a previous study on the relationship between education and various socio-economic factors such as income, land and material standard of living in two villages in Pakistan, a higher relationship was found in the village (A) which had closes contact with the urban sector than the other village (B) (Raza 1969). We interpreted those data in the following way:

Education is most probably a result of the close contacts with the modern sector in village A rather than the reverse. The higher incomes in village A over a longer period of time have meant that the parents there more frequently can afford to give their children education than the parents in village B. Education in an agricultural settlement does not have any short term effect on the agricultural production or methods since the curriculum offered is designed for the most part to prepare the students for higher studies, which few of them will ever experience. Therefore education in rural areas is most probably a fruit of modernization in other sectors rather than a means for development in the rural environment . If this is so, it is certainly in accord with findings in many other countries. Griffiths (1968, p. 11) says, for example, "I hold the view, based on my own experience - and I have seen no evidence to the contrary - that in backward rural areas the schools (schools giving general education) cannot be made a main instrument of progress". He further states that "only when economic development is already taking place can the schools be expected to paly any part". We believe that this might be true with regard to the conventional type of formal schooling. However, it is at the same time ture that the school designed as a means for the development of a specific cultural milieu in a direction which can only be determined by an unbiased analysis of the same environment, has not been brought into existence as yet in the former colonies under western influence in Asia. An obstacle often mentioned to such a planning policy is the parents' expectations of the schools as a means of escape from the hardships or rural life (ibid. p. 12). Still, if the laternative, becoming more and more common, is the miserable life as an unemployed in slum areas in the cities, we might have come to the point where our existent ideas about educational planning should be revised. This opinion is reinforced by Wilson (1967, p. 1) who, after twenty years of research in the field and living among rural communities, in contrast to Griffiths, has become convinced that the "key to progress and development in the rural sector "lays in the field of education and training", not only training of scientists, technicians and administrators, but also the "education and training of the producer, of his family and of the rural community". He considers the biggest change in the last 10 years to be the realization "that rural development involves human rather than technical problems" since "traditional values have to be changed" (Ibid. p. 2). At the same time he emphasizes the importance of exogenous factors like land reforms which must coincide with the educational efforts if agricultural development is to take place.

## Previous research by IER on concept-formation ability

The research on the relationship between concept formation ability and academic achievement at three levels of development (grade 3, 5 and 7) conducted by Dr Shaukat at IER was also linked to the drop-out problem. The underlying hypothesis was that one of the reasons for high rates of drop-out was poor concept formation during early years of education.

The study involved 1200 primary level pupils from third, fifth and seventh grades, studying under different controlling authorities in the Lahore district.

The concept formation ability was tested by using 56 cards with different pictures referring to four concepts; colours, concrete concepts, spatial form, and numbers. Each concept was represented on 7 cards.

First the pupils were shown one card from each concept and at the same time they were told the nonsense name referring to each concept. They were prompted in order to learn the linkage between the nonsense name and the picture of the specific concept on the cards.

After that they were shown eight new cards and were asked to say the right nonsense names themselves. This was done eight times. If they failed they were prompted each time.

The maximum number of right responses was 56.

The result: As the processing of the data has not as yet been completed we are only able to report some general information from the study, which has been reported to us verbally. There was an over all range from 29-47 right responses and a total average of 35. The average right responses from the different schools were:

| | |
|---|---|
| English Median School (starts English from the first grade): | 43 |
| Co-operation, urban schools: | 35 |
| Government, urban schools: | 38 |
| Government, rural schools: | 33 |

The over all picture of the results are given below.

| Concepts | | Nonsense name | Approximate no. of mistakes per concept in average |
|---|---|---|---|
| Colours | Red | Dum | 2,1 |
| | Green | Duj | |
| Concrete | Games | Dug | 1,9 |
| | Means of transportation | Dub | |
| Spatial forms | Round | Fig | 1,8 |
| | Different designs | Rug | |
| Numbers | Two | Nug | 5,7 |
| | Five | Chim | |

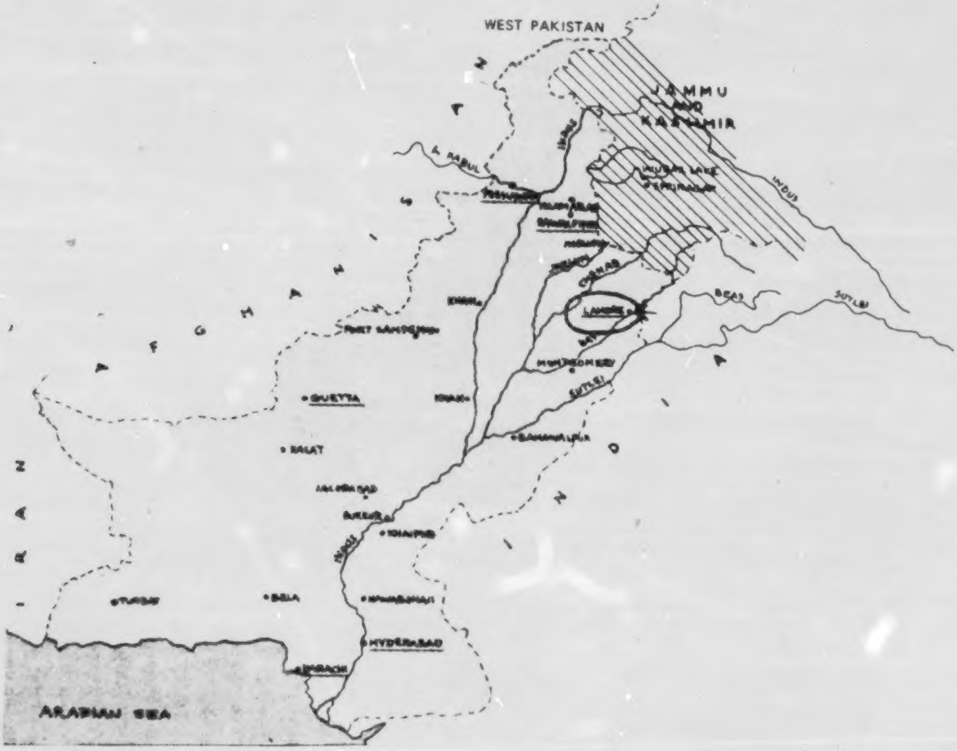
The total number of possible mistakes is 7 per concepts. The results presented above, show that the pupils in general have learnt to combine the colours, concrete and spatial form-concepts with the right nonsense name already after one or two trials. But they needed in average almost six trials in order to learn the numbers, i e many pupils did never learn to combine the nonsense names Nug and Chim with the number concepts.

There were also some astonishing results, e g grade 3 boys in Government City Schools had more right responses than the grade 7 boys from Governmental rural school.

In general so far no significant relationship between school achievement expressed in the form of marks and the concept formation ability has been found. On the contrary some indications of a negative relationship between the two variables were discovered. The hypothesis concerning the relationship between school-drop-outs and concept formation ability has thus far not been examined.

## Presentation of the pilot study

The "pilot project" research has been carried out in collaboration with the Institute of Education and Research, University of the Punjab, both in the city of Lahore in Pakistan and outside the town in different villages. Professor Shaukat, Head of the Research Wing of the Institute, has acted as research supervisor in Pakistan. The major portion of the out of school children and the adults are from rural and semi-rural areas, (e g, various "basties" i e village-like slum areas) and the majority of the school children are from semi-rural areas. All the tested subjects are living in an area within a radius of 25 miles from Lahore (see map.)



The Lahore region is a part of the province of Punjab; the largest province in Pakistan (including 65 % of the total population). Lahore is the second most populated city with a population of approximately 2.5 million, and historically recognized for the various educational institutions. Yet enrollment ratio at the primary level of education (grade 1-5) in the Lahore region, is only around 35 % which is lower than the average for the whole country (42 %).

It is important to recognize the limited scope of this study. The numbers within the subgroups are rather small. But it is a tentative attempt to investigate the validity of the methodological approach being used, especially with regard to the effect of schooling.

Most of the male adults who have been "tested" and interviewed are farmers, craftsmen, sweepers, labourers or petty businessmen. Most of the farmers are tenants or temporary workers. A few are persons who cultivate a small (3-7 acres) piece of land of their own. Their income varies from around 100 Rs to 600 Rs per month. The craftsmen are mostly tailors, barbers, or drivers earning between 100-300 Rs per month. The labourers work in nearby factories, and have a monthly income of 300-500 Rs. The businessmen may earn up to 1000 Rs, but there are few such persons included in our study.

Most of the adult females are housewives or sweepers. Sweepers, either male or female, have a monthly income of around 200-250 Rs. Although the prices are lower in Pakistan than in the Western world, e g in Sweden, keeping in mind the large families they have to support, most of the people participating in our study must be regarded as living at poverty level.

Some teachers are also included in our study, but most of them are primary teachers earning around 300-400 Rs a month, and therefore they are also living under poverty-line circumstances.

Most of the out-of-school children in the age group 11 and 12 work mainly as sweepers, helpers in workshops and shepherds, earning 2-3 Rs a day.

The investigations were carried out in the period from April to August 1976 i e under difficult weather conditions. The temperature went up to 47 °C (in May and June) causing a tendency to faint among buth the research assistants and the subjects being tested.

In July there were unusually heavy rains in Pakistan which flooded most of the areas where we were working. As we had to use the ordinary premises (in those areas) we had to be careful that the roofs and the walls didn't fall on our small pieces of wood, pictures and coding forms. As many people, especially small children, died as their huts collapsed around them, we felt repeatedly that "research" is a rather absurd activity in an absurd world. And, not astonishingly, some peoples' response to the question of whether they wanted to change anything at home was: "A new house!"

Being so susceptible to the effects of the powers of temperature and weather which are completely beyond our control, one might better understand how the influence attributed to God or other supernatural forces grows proportionately in strength. And surely trying to change peoples' comprehension of the reality of the religious and mythological components which serve as modulators for the psyche, without being able to participate in increasing the possibility of actual change through united human effort is really to bind stones to the burdens. Being an objective scholar in that sense can only contribute to some sort of "cognitive imperialism".

Instead we must understand the way in which people comprehend their world and various potential attitudes towards change from "within" i e understanding interpreted in its hermeneutic sense, as was discussed in the introduction.

As this pilot study, as well as any future research within our project, is included in an aid programme, it is worthwhile take into considerations the following statement of Levi-Strauss (1967 p. 39, in Leach 1970).

"Our own society is the only one, which we can transform and yet not destroy, since the changes which we should introduce would come from within!"

On the other hand, experiencing the obvious injustice in the social and economic structures in Pakistan one also feels a demand to accelerate change towards something - anything seems better than the current situation. Of course many mistakes have been made in the past due to an overly optimistic belief in Western technology as the model-solution to problems in the underdeveloped world. But an empathetic, dialogue-oriented approach, as emphasized in the main project proposal, is a point at which indignation over the current unjust situation and a desire to "learn together with the people about their own world" (see original project proposal p. 1) on the one side, can meet the "point of departure from which people in Pakistan regard phenomena as given". which constitutes their knowledge, on the other side. Therefore, the fact that an individual can only arrive at new knowledge if he reconsiders his already established hypotheses, is certainly valid for both sides in the dialogue-oriented process.

## The population of the pilot study

As mentioned above the number of subjects is small within different sub-groups of the population of the study. It is so because the intention of the study was, within the limited time and available resources, only to make a tentative inquiry into the problems of cognition and the socio-cultural environment as a base for further studies. In all there were 114 school children (grade 1 to 8), 80 out-of-school children and 100 adults with different educational backgrounds participating in the study, giving a subtotal of 294 persons.

The following gives the numbers of the different sub-groups to which the later discussion refers:

| | | | |
|---|---|---|---|
| Out of school children | 1. | Age 7-9, | n = 46 |
| | 2. | Age 11-12, | n = 34 |
| School children | 1. | Grade 1-2, | n = 32 |
| | 2. | Grade 3.5, | n = 66 |
| | 3. | Grade 7-8, | n = 16 |
| Adults | 1. | Illiterate, | n = 17 |
| | 2. | Passed literacy course, | n = 15 |
| | 3. | Primary education (grade 1-5), | n = 14 |
| | 4. | Middle education (grade 1-8), | n = 19 |
| | 5. | Matric education (grade 1-10), | n = 15 |
| | 6. | Teachers (with Primary Teaching Certificate, 15, and Bachelor and Master of Education, 6), | n = 21 |

The children were divided into rather "broad" age groups because of the uncertainty of the proper age. Out-of-school children age 7-9 and age 11-12 will thereby be approximately comparable with school children from grade 3-5 and from grade 7-8.

However, certain comparisons over the ages and the grades have also been done in order to examine the possibility of any particular trends. In these cases the pattern of the answer for each grade and age group has been given. The numbers of subjects within these groups are as follows:

Out-of-school children

| Age | 7 | 8 | 9 | 11 | 12 |
|---|---|---|---|---|---|
| No | 17 | 12 | 17 | 19 | 15 |

School children

| Grade | 1 | 2 | 3 | 4 | 5 | 7+8 |
|---|---|---|---|---|---|---|
| No | 16 | 16 | 23 | 21 | 22 | 16 |

The age of the school children varies within each grade, but roughly the average age for each grade is, grade 1-5 years, 2-6 years, 3-7 years, 4-6 years, 5-9 years and grade 7 and 8-11 to 12 years of age.

The average age of the adult sub groups differ within a quite limited range, from 28.5 years for the teachers to 39.2 for the illiterate. The educational profile for Pakistan presented above gives us the over all educational background in order to understand the distribution of amount of education of the relevant age groups. Our illiterate sub group belongs obviously to the majority in their age groups while those who have any degree of education belong to the minorities.

The subjects belonging to the group that is called "Adult literacy courses" (average age 32.6) have all quite recently (three to four months ago) finished their courses. Their current educational status might therefore be as good as for those who finished their primary education (average age 30 years) about 20 years ago.

For further information of the subgroups see appendices.

The numbers of the different sub groups varies because of unforeseen difficulties, mainly floods, which made it impossible to reach certain areas which were included in the original research plan.

The study has two parts, first three different tests concerning different cognitive aspects and second the interviews concerning the attitudes towards change and belief orientation.

## The tests concerning cognitive aspects

### Multiple ordering

This test situation was originally designed by Bruner and Kenney. A full report of their study with 3 to 7 year old American children is given in Bruner (1967, chapter 7). The test problem is designed to illuminate the transition from a perceptual to a conceptual mode of problem solving.

The test consists of a square board divided into 16 smaller squares. There are 16 wooden cylinders varying in height and diameter. In the direction from D1 to D4 the height varies. In the direction from A1 to D1 the diameter varies (see figure 4).

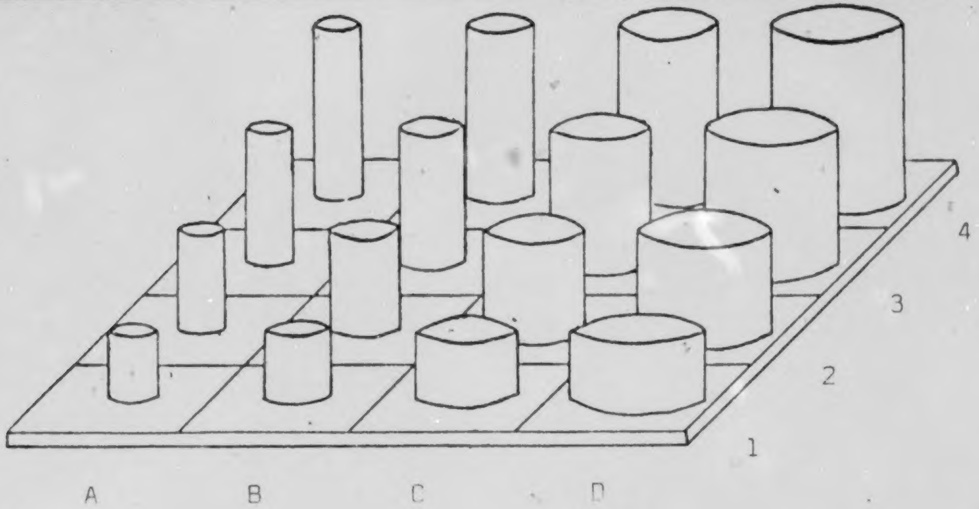


Figure 4 The original order of the wooden cylinders on the matrix

The problem to be solved in this test situation is dependent on the ability to simultaneously take into consideration two dimensions in arranging a pattern. "Multiplication of classes" in Piaget's terminology.

There is a growing difficulty as the testing goes on to solve the problems by perceptual recognition and consequently the need arises to apply conceptual rules in order to be able to solve the problems.

The following test and coding procedure were used:

1) The cylinders in row A to D were taken away. Failure to put them back in right order was designated as A: No serial organized conception.
2) The cylinders in the square C-D-3-4 were taken away. Failure to put them back in right order was designated as B: Serial organized conception to one dimension.
3) All cylinders but A1 were taken away. Failure to put them back in right order were designated as C: Incomplete serial organized conceptions in two dimensions.
4) All cylinders were taken away. Cylinder A1 was put on the position of D4. (To couple the pattern it has to be turned $180^{\circ}$ "in the head"). Failure to complete the transposed pattern was designated as D: Non-reversible organized conception in two dimensions.

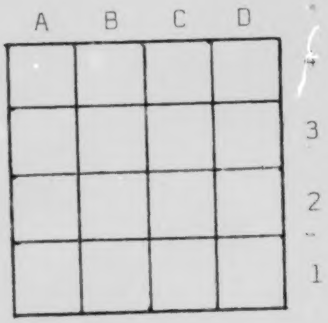
5) Those who succeeded with item 4 were designated as E: Reversible organized conceptions in two dimensions.

The following is a full description of the testing procedure. Note that the children are prompted when they make a mistake. The testing procedure always include a double check on mistakes.

## *Multiple ordering: Test instructions*

Put the board in front of the child. Put the blocks on their right positions so he can see it.

The position of the board should be as follows: (See figure 5)



A1: Is the shortest and thinnest

D4: Is the longest and thickest

Figure 5 The matrix used for testing multiple ordering

Let the child handle different blocks so he can feel the differences in his hand. Point out that they differ in height and diameter.

Tell him that you are going to play for a while and that he must try to figure out how the pattern of blocks is constructed. Tell him to learn the pattern so well that he could put the blocks back in their right positions if and when you remove them.

When he stops looking ask him if he has noticed the two dimensions (height and thickness). Prompt him if he has not. (Show him). This learning period may not exceed five minutes.

1. Start the testing series by removing blocks A1-4 and ask the child to put them back in their right positions. If he cannot put them back in their right positions - prompt him (show him - explain to him).
2. Remove 1A-D. The same procedure.
3. Remove D1-4. The same procedure.
4. If the child succeeds with D1-4 go on with B-C-3-4 if he fails try 4A-D without prompting. If he fails - stop testing. If he succeeds go on with BC-3-4.
5. Remove B-C-2-3. Ask him to put the blocks back in their right positions. If he fails prompt him. Ask him to look closely from different positions so he can notice the two dimensions.
6. Remove CD-34. No prompts are given this time. If the child fails - stop testing if he succeeds remove all blocks but A1.
7. Ask him to construct the pattern as it was before and tell that he is not allowed to move A1 to another position. If one or two blocks are misplaced - but the overall structure is all right - prompt him. Ask him to look closely. If it is right point to the wrongly placed blocks and ask him if they should be moved. If he fails or succeeds with the help of prompts go on with D1. (Those who succeed with A1 without prompts do not do D1 but go straight to the reverse shift.)
8. Remove all blocks but D1. Ask him to reconstruct the pattern. Do not prompt him. If he fails stop testing. If he succeeds go on with the reversal shift.
9. Remove all blocks. Put block No A1 on the position of D4. The pattern will be turned $180^0$. Ask him to complete the pattern from this angle. He is not allowed to move block A1. If he succeeds stop testing. If he fails (1 or 2 blocks wrong) prompt him. Whether he succeeds or not with the help of prompts go on to D1 reversal.
10. Put D1 on the position of A4 ask him to complete the pattern. D1 is not to be removed. No prompts are given if he fails. Stop testing if he succeeds. Stop testing.

Those who fail with 4A-D have a:

No serial organized conception - Coded A

Those who succeed with 4A-D have a:

Serial organized conception in one dimension

Those who fail with CD-34 have a:

Serial organized conception in one dimension - Coded B

Those who succeed with CD-34 have an:

Incomplete serial organized conception in two dimensions

Those who succeed with A1 have a:

Serial organized conception in two dimensions - Coded C

Those who succeed with D1 have a:

Serial organized conception in two dimensions

Those who fail with D1 (reversal shift) have a:

Non-reversible organized conception in two dimensions - Coded D

Those who succeed have a:

Reversible organized conception in two dimensions - Coded E

Was not this test a very foreign element in the social setting of a Pakistan village? When we did the first tryout of the test none of the children had had any experience with any toy or teaching aid like this. On the other hand the cylinders were ordinary pieces of wood, so there was nothing strange in them. We had an interpreter with us but it was possible to give all the instructions to boys seven to ten years of age without a single word spoken.

We started by taking away a few cylinders. Shook them in our hands. Put them back on the wrong positions. Waited and looked concerned. Changed them to the right positions. Nodded our heads. Looked pleased. Did it again. Looked around at the boys for attention which showed that they knew it was wrong. Let tehm put them in their right positions. Continued in this fashion through all the items. By the time we had finished at least thirty other boys and old men who wanted to have a try had arrived. There was much laughter and high motivation.

The following statements were made by our testing assistants:

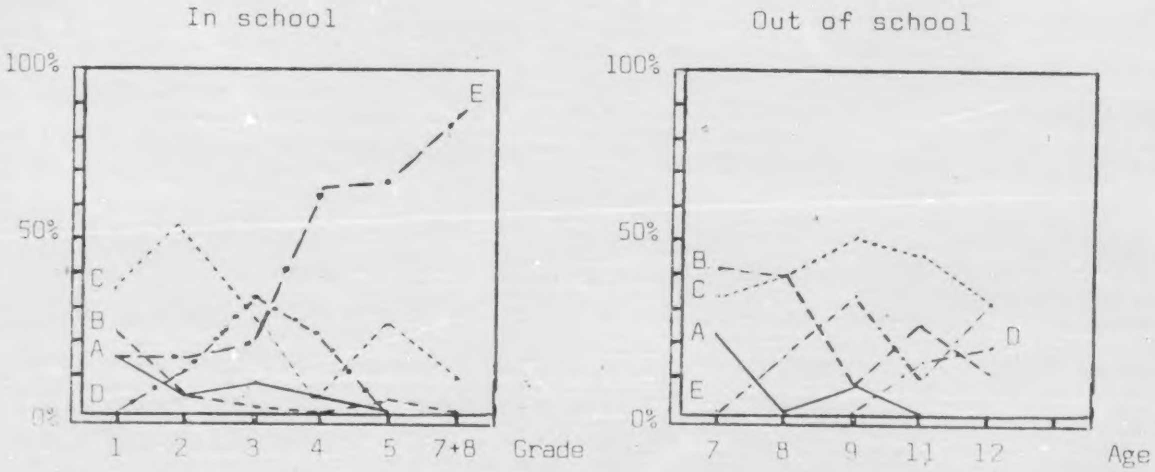
1. We had no difficulty in administration of the test.
2. This test was very interesting for the children and it had a good discriminatory value. It is very easy for the adults.

What we found especially valuable with the test was its being non-verbal. All those very intricate problems which are part and parcel of translations of verbal messages between different cultures are thus avoided.

From the way in which the testing situation was organized, there was no possible way to discriminate between the items when the problems were solved by a perceptual and when they were solved by a conceptual mode of attack.

Our primary interest was to see if schooling had any effect on the ability to deal simultaneously with two aspects of situation. This question was pursued in the testing procedure from concrete and tangible situations to abstract situations, i e from situations where the structure of the pattern was on the board to situations which demanded that the structure of the pattern be held in the subject's head.

The ability to deal with more than one aspect at a time seems on a common sense level to be related to success in complex problem solving in any cultural setting.



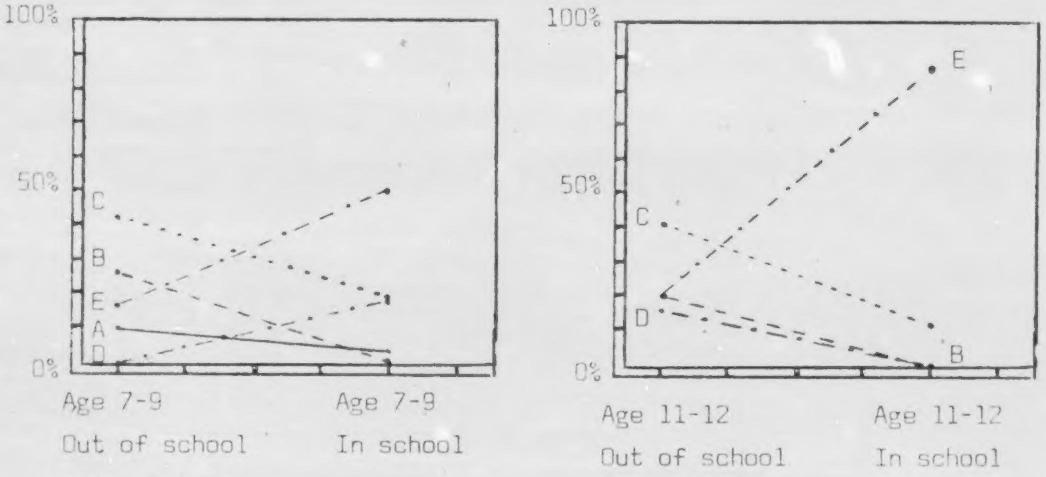
(Fig. 6a)

(Fig. 6b)

Figure 6 The percentage distribution of A-E categories

In figure 6a we have summarized the results of the testing in relation to grade. The diagram shows that the ability to "hold the pattern in your head" is strongly related to schooling. There is a sharp rise in the E-curve after three years of schooling. Between the third and fourth school year the percentage who succeed in transposing the pattern 180° rises from twenty to seventy percent.

The diagram in figure 6b is based on the results of out of school children. The test results are related to chronological age instead of to grade. There are difficulties in comparing grade with age as very few children or adults know exactly how old they are in number of years. But the age of seven corresponds most probably with grade two - three. The most interesting trend in the diagram is the very absence of a trend. There is no interpretable change in the proportion of youngsters who succeed at keeping the structure of the pattern in their heads from 7 to 12 years. If we compare the proportion of success in adult illiteracy (fig. 6) we get the same picture. Being out of school means no pressure toward growth in this domain of conceptual capacity. These results are in agreement with the overall picture of studies of Bruner et.al. (1967) in Senegal and Mexico.



(Fig. 7a)

(Fig. 7b)

Figure 7 The percentage distribution of the categories A-E

The diagrams in figures 7a and 7b compare the difference of being in and out of school. In the age groups 7-9 years there are already rather clear differences between in and out of school children. But what is more illuminating as regards the effect of schooling is that the differences between groups grow with number of years at school. The pattern in the out of school group is nearly constant but there is a marked improvement in the in school group.

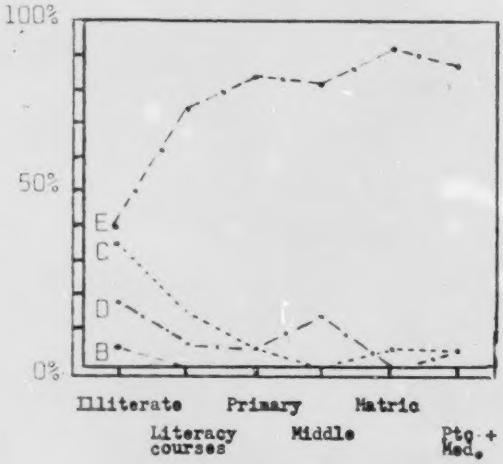


Figure 8 The percentage distribution among adults of the categories A-E

Figure 8 is based on the results of the adults. From the aspects of test construction the diagram shows very clearly that this test has no discriminatory power above the level of primary education. But from a practical point of view it shows the tremendous effect of literacy courses as concerns the ability to handle more than one aspect at a time in the conceptual domain. This result should be compared with the sharp rise in the E-curve after three years of schooling. Is the very ability to learn to read coupled to special cognitive effects?

One must bear in mind that the results are based on differences within and between groups. The diagrams are not growth curves; rather they show differences within each group in solving conceptual problems. To study the question whether the act of learning to read has any specific cognitive effects one must study individuals over time.

As a consequence of this pilot study we now consider a follow up study of the cognitive effect of literacy courses as one of the most fruitful approaches to studies in cognitive growth.

## What is similar?

Intellectual growth is the process by which people reach new levels of comprehension of themselves and the world they live in. It is a process of going beyond what is sensorily given. In the process of grouping together and dividing into parts, the mature intellect united and tells apart from other standards than those of the immature child.

In this test we have studied from which criteria children and adults group together pictures of well known things. The objects pictured in the test vary in many dimensions. We have tried to pin-point what characteristics they have used as a basis for rendering them similar.

The following five categories have been used as a basis for distinguishing between types of answers:

Joint Action = J
Affective = A
Perceptual = P
Functional = F
Nominal = N

### *Joint Action*

The similarities are based on an action which joins the item to the group. There are no similarities in the things themselves but through an outside action they will go together.

Example: Saw and tree i e with a saw you can cut down a tree. Bottle and cup, you can pour water from a bottle into a cup.

### Affective

The basis for grouping items is the emotion. They are aroused by affective evaluation of the things grouped together.

Example: These are very expensive. They are beautiful. They are very important. They are good to eat. They smell nice.

### Perceptual

The child may render the items similar on the basis of immediate phenomenal qualities such as colour, size, shape or on the basis of position in time or space.

Example: These are red, green etc. These have wheels, legs, eyes etc. These are square, long, short. These are in air, on land, in the room. These can be seen in summer, winter, etc. These have the same shape.

### Functional

The child bases equivalence on the use of functions of the item, considering either what they do or what can be done with them. In principle they go beyond what can be seen in their effort to construct similarities.

Example: They make noise, produce heat etc. They can fly, walk, turn, jump, sail etc. You can eat these or fly with them. You can turn them or you can stop them etc. You can sit on them. They can float etc.

### Nominal

The child groups the items by giving them a name.

Example: They are birds, animals, fruits, furniture, buildings.

The test procedure and the method of analysing the answers are originally constructed by Olwer and Hornsby (in Bruner et.al., 1967). We have used other pictures and a slightly different type of analysis.

The test consists of 40 pictures (figure 9). Each picture was one square inch and glued to a piece of wood. The pieces could be handled separately.

### *Testing instructions*

Put all the blocks on a table (or the substitute for a table). Ask the child if he can recognize and name what he sees.

Point to every block and ask him to name it, if he does not know a picture explain to him what it is.

Check his understanding by going back to the "unknown" picture after he has named all blocks and ask him again: What is it?

Record how many he did not know (Code on the sheet). Things can be similar in many different ways, in what way are these things similar or go together? (You must really make him understand what "similar", the same, alike, etc means).

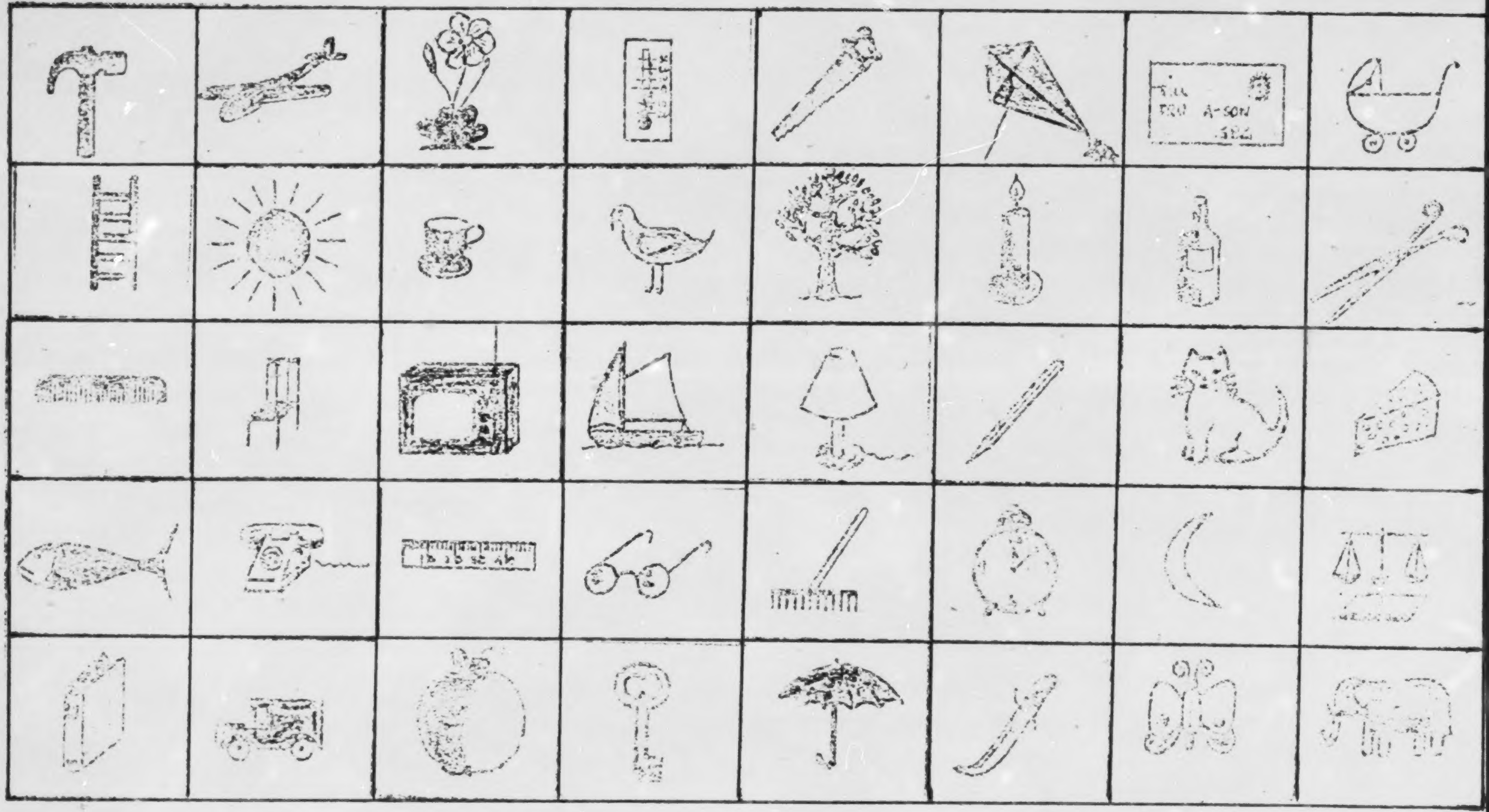
Whatever his answer is, explain and prompt him so the following categories and similarities are discussed:

| | |
|---|---|
| Perceptual | i e have wheels |
| Functional | i e can ride on them |
| Nominal | i e vehicles (means of transportation) |

After that, go back to the block and say: "Now I want you to find things that are similar. Pick them up and put them in front of you and tell me why they go together. You can take as many pictures as you want. (Repeat the best sentence after every grouping.) Let the child do ten groupings. If the child says more than one similarity for one group ask him which he thinks is the best.

Example: Umbrella and kite.
I can have them in my hand, and they are in the sky. Ask him which is the best similarity and code that one.

Observation: It does not matter if the similarity is logically wrong, code the rule!


TILL
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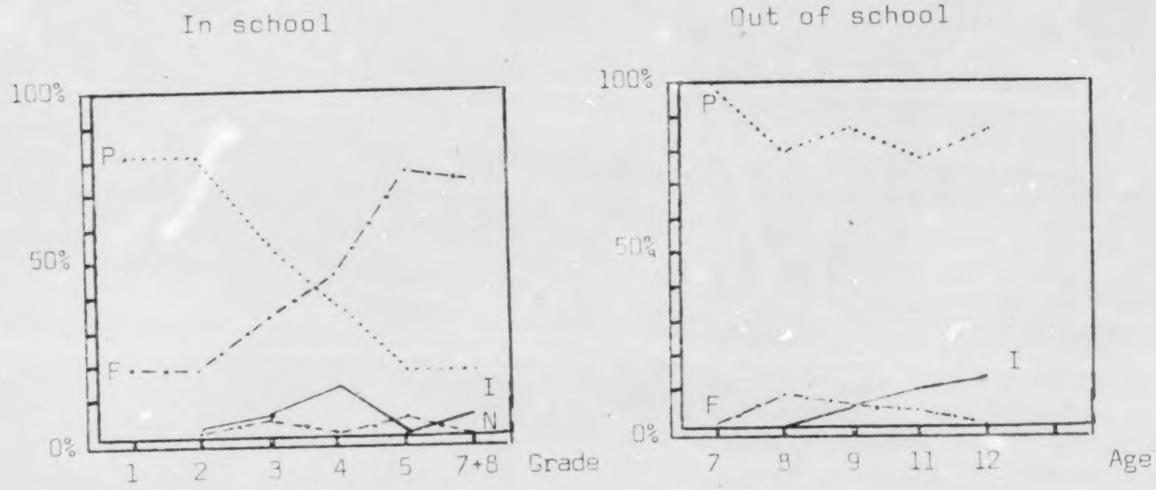
582
10 20 30 40

Figure 9 The pictures used in the test on similarities

The administration of this test was not without problem. The testing procedure is a mixture of verbal responses and manipulative responses. The coding procedure is highly dependent on verbal responses. There are always difficulties in telling what someone really means from what he is saying. To this problem is added to the problem of what is possible to say in different languages.

From the testinstructors we know now that the pictures were not so wellknown as we believed after a first try out. We know also now that some nominal level words e g vehicle are not so common in Urdu or Punjabi as in English or Swedish. With this difficulties in mind, we will present our findings.

Figure 10 shows the results in relation to grade. Nominal and joint action presonses are very few and are given in approximately the same proportions through all grades. The curves which are interesting in relation to developmental growth are the perceptual and functional response curves. Functional responses grows as a function of grade and perceptual responses decrease. Among the out-of-school children (fig. 10b) nothing like this happens. The perceptual response mode is most frequent all the time from 7 to 12 years, whereas functional and joint action responses are on a low level.



(Fig. 10a)

(Fig. 10b)

Figure 10 The percentage distribution of different categories on various grades and ages

In figure 11 we present the results in relation to educational level amongst adults. The overall view shows that the response mode is dependant on educational level. The proportion of functional oriented responses grews from the illiterate to the Ptc+Med. level. Joint action and perceptual responses are decreasing. Nominal responses are very infrequent all the time. Once again we want to draw attention to the effects of literacy courses. The most obvious change in response mode take place between the illiterate and the literacy course groups.

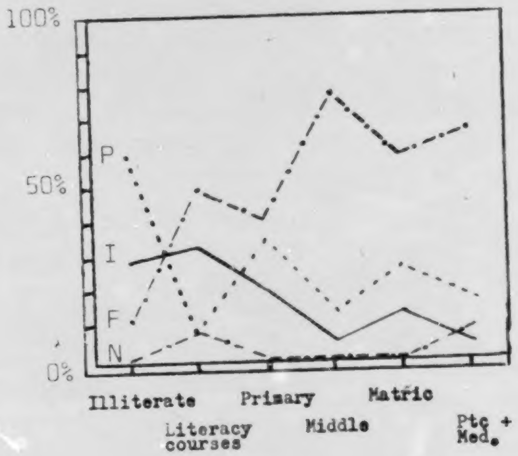


Figure 11 The percentage distribution of different categories on adults with various educational background

From one of our studies in Gothenburg concerning conceptual growth we present in figure 12 the result in relation to age. Every age group consist of approximately 50 individuals who, of course, all from the age of 7 are in-school-children.

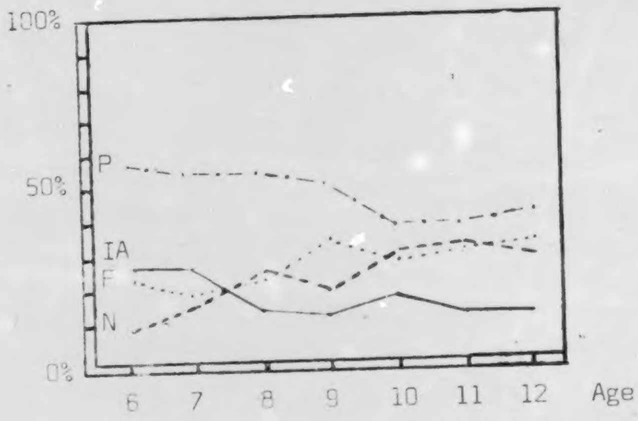


Figure 12 The percentage distribution of different categories on school-children in Gothenburg Sweden. (From 1974-75)

The over all tendency is the same over many studies. There is a steady raise of the functional and the nominal response mode from 6 to 12. Perceptual and joint action response mode shows a steady decline as the children grow older.

If we compare the results from Lahore (fig. 10a) and Gothenburg (fig. 12) the over all tendency is the same concerning the perceptual and functional response mode in relation to grade. However, nominal responses do not increase in relation to grade in the Lahore study. To a certain degree this is most probably a result of different language structures and not so well chosen pictures. This should be checked in a more thorough study before any definite conclusions can be drawn.

On the other hand it is quite possible that the effect of schooling varies according to qualitative differences in the educational process.

The study on concept formation ability at IER that was discussed above (p. 27) shows a marked differential effect of various type of schooling within the same culture. That the outcome of educational processes in different cultures could include different cognitive strategies is in this perspective a highly expected result.

But as we know that there are problems concerning the culture validity of the test we will not at this stage of our studies try to formulate any theory to explain these differences.

## On learning and ordering

The third test aims at finding different conceptual principles which might occur when the subjects are asked to learn to memorize a number of items.

Sixteen different items were put on a table in a random order (four pictures of fruits, four of articles of clothing, four pictures of animals and four of utensils) and the subject was asked to order the pictures in a way he thought would be the best for learning the items. (See appendix 1 b).

The pictures had four different colours, so that each colour was represented on one item from each "conceptual" group, e g there was one picture of a yellow animal, one of a yellow fruit etc. This arrangement made it possible for the respondent to arrange the cards either according to a perceptual principle, the colours, or according to a conceptual principles, the four groups of items.

The instructions to the research assistants were as follows:

1. Check whether they recognize all items. If not prompt them. Double prompts on the items they did not know.

   Obs: Random order in the packet of cards.
2. Give them the packet and say: "Later on you will be asked to learn these items to be able to memorize them. Arrange the cards in the order you find easy to learn".

   Time limit: 5 minutes. Obs: Stop before that time if they say that they are satisfied with the order. Note the time taken to arrange the order.
3. Take up the cards in the order they have arranged them. Ask which items they remember. Code in Col. 1.
4. Group the cards in front of them in the same order that they have arranged. Ask if they would like to change the order. Time limit: 1 minute.
5. Take up the cards and present the cards one by one, with a fixed time order. Ask them to remember as many items as possible after each presentation. Code each trial.
6. Maximum 10 trials! Stop the testing when they remember all the items.
7. The sorting level is coded from the order in the packet of, cards after the last trial in the categories which were given in the introduction above.

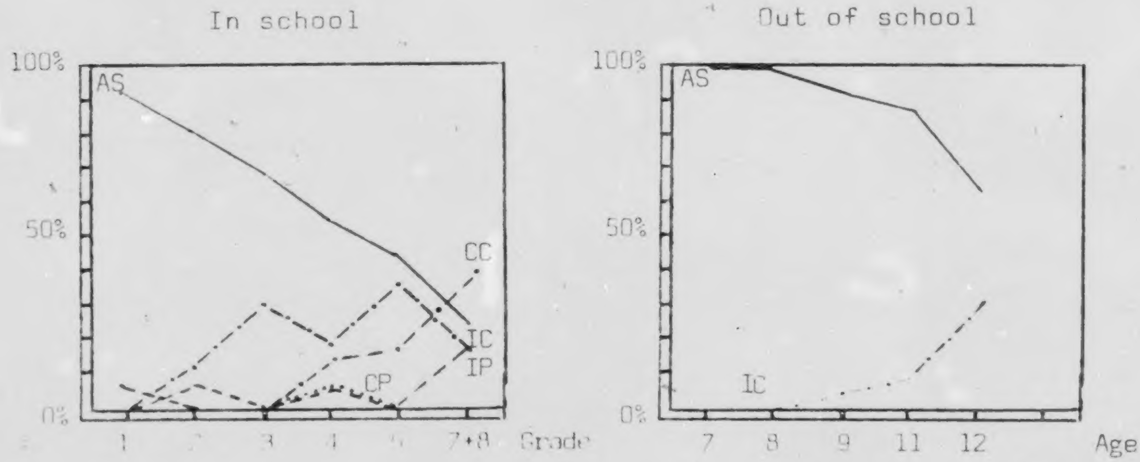
The different sorting levels were according to the following principles:

1. Conceptual level; animals, fruits, clothes, etc.
   a) Complete (no mistakes) (Code C-C)
   b) Incomplete (1-4 mistakes) (Code I-C)
2. Perceptual level, green, red, yellow, no colour
   a) Complete (no mistakes) (Code C-P)
   b) Incomplete (1-4 mistakes) (Code I-P)
3. Action Sorting, no sorting principal at all (Code A.S.)

According to the research assistant those who learnt the 16 items did so quite quickly, after 3-4 trials. Those who did not learn the items after 5 trials did never learn them, with the effect that the trials between 5-10 were quite boring both for the assistants and the subjects. However, our purpose with the test was to investigate the principles in which the cards were arranged and not the time for learning the cards.

## *The findings*

In figures 13a and 13b the distribution of the various coding principles on different grades of the school children and different ages of the out-of-school children are shown.



(Fig. 13a)

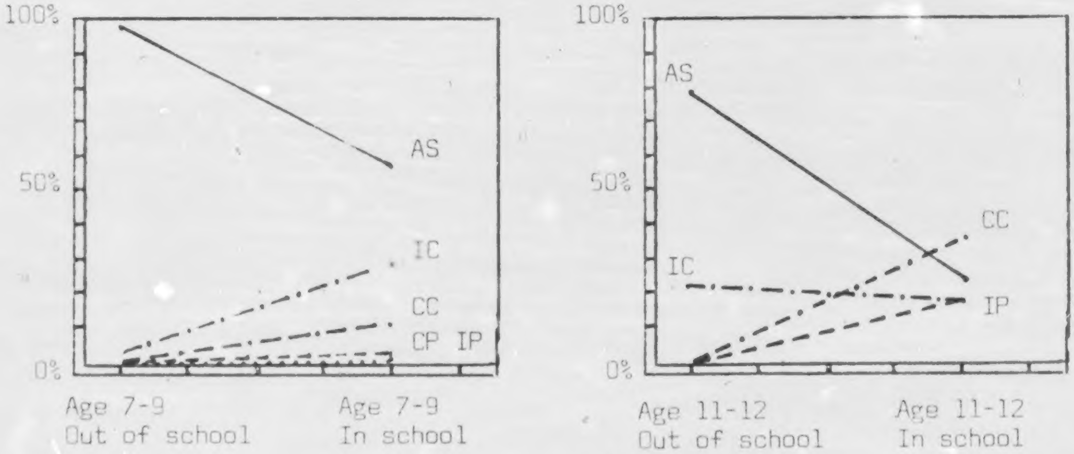
(Fig. 13b)

Figure 13 The distribution of different coding principles on grades

As regards the school children there is a clear tendency of decrease over the grades as far as action sorting, i e no sorting principle, is concerned. The complete conceptual (c.c.) ordering principle is also used more and more frequently after grade 3.

With respect to out of school children the most significant finding is the dominance of the AS-principle over the years, although the incomplete conceptual principle is used by a minor portion of the children above the age of 9.

In figures 14a and 14b we have isolated the comparison between out-of-school and school children who are of approximately the same age. Schooling seems to have the effect that conceptual principles of ordering are used more.



(Fig. 14a) (Fig. 14b)

Figure 14 The distribution of different coding principles on out-of-school and school children

Regarding adults with different educational backgrounds from figure 15 we notice again the rather sharp change between illiterate and those from adult literacy courses. Moreover, the complete conceptual (c.c.) principle of ordering the cards, becomes dominant for those who have passed matric, i e 10 years of schooling, whereas for the adults with 8 years of education (middle) the response-pattern is comparable to the school children in grade 7-8.

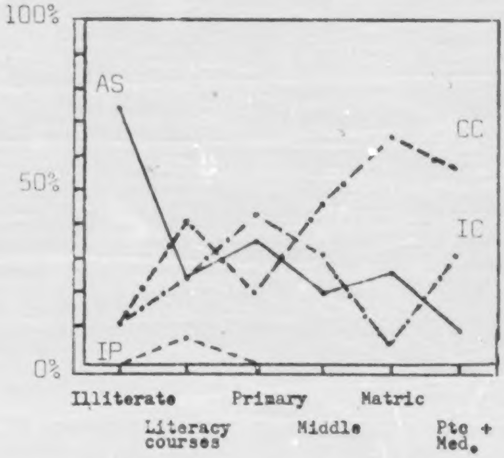


Figure 15 The distribution of different coding principles on adults with various educational background

Discussion

We have discussed the test on cognitive aspects rather thoroughly above although the numbers of the subjects of the study are limited. We have done so in order to present the approach for the studies rather than claiming our findings to be representative. Certain findings seems to be fairly clear, but as it is a pilot study, we have refrained from drawing any far-reaching conclusions.

Still we would like to point out some general trends in summarizing our results.

There is a marked difference in the response pattern between children in school and children out of school. The response pattern of out of school children indicates a lack of growth in relation to age. Similar findings are reported by Bruner et.al. (1967). The growth pattern of in-school children substantiate the over all picture of cognitive growth as we comprehend it in the Western society.

From the study on multiple ordering we found that the ability to deal with more than one aspect at a time grows in relation to grade.

When the modes of combining various items were tested we found that the preference of grouping from functional attributes grows with grade and the perceptual response mode diminishes.

The children were also asked to arrange a number of items in the order they would like to learn them to be able to memorize. The results show that there is a decrease in the action sorting principle of ordering with grade and that the complete conceptual ordering principle is used more frequently from grade 3 to grade 8.

As concerns adults the general findings are the same. The response pattern shows a dependence of educational level. A higher proficiency in dealing with many aspects, preference for a functional grouping principle and the use of a conceptual ordering principle follow with more years of schooling.

As we have pointed out before there is a marked difference in the response pattern between the illiterate and the literacy course group. The transition from illiteracy to literacy seems to be a fruitful research topic from the perspective of cognitive growth.

### The interviews concerning attitudes towards change and belief orientation

Most of the questions in the interview are open-ended questions with no fixed alternatives. This, of course, had the effect that we got many different answers and opinions from the respondents. Still the majority of the answers fall into a few major categories which will be shown and discussed below. The results of the interviews for the different subgroups are reported in appendices 2a-2k.

### The school and out-of-school children

Starting to compare the school and out-of-school children we find quite clear differences as regards some basic aspects of the comprehension of the surrounding world. (See appendices 2b-e questions 1 to 6.) The findings can be summarized as follows:

The school children have travelled more, have better acces to means of information like books and newspapers, and have a higher degree of geographical and political as well as basic scientific knowledge. The school children also have higher expectations with regard to future occupation, which is shown below.

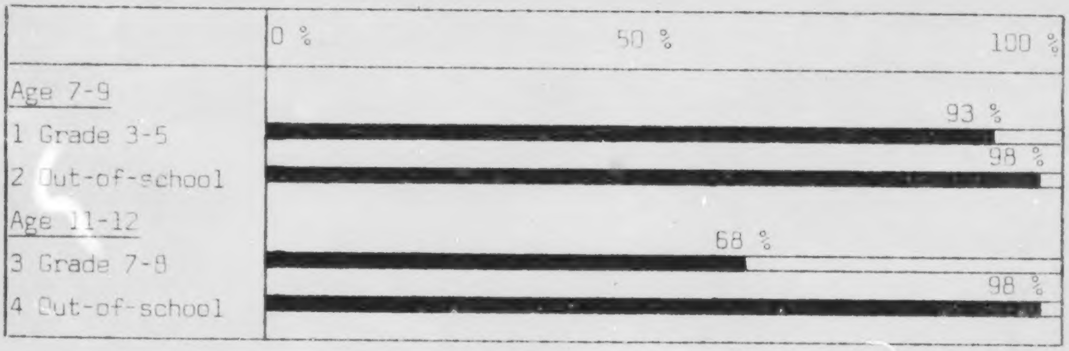
| | Occupation the children would like to have | | | | |
|---|---|---|---|---|---|
| | Don't know | Professionals | Business | Labourer | House wife |
| Age 7-9 | | | | | |
| Grade 3-5 | 14 % | 79 % | | 39 % | 5 % |
| Out-of-school | 16 % | 16 % | 2 % | 28 % | 38 % |
| Age 11-12 | | | | | |
| Grade 7-8 | 13 % | 81 % | | | 6 % |
| Out-of-school | 9 % | 6 % | 6 % | 38 % | 38 % |

But when it is a question of attitudes towards change the differences between the school children and the out of school children are not so evident. The patterns of the answers to various questions regarding different aspects of change, are presented below.

The figure show that most of the children neither have any clear ideas about what they wanted to be changed in their lives, homes, locations, country and the world, nor, how different things could be changed. The grade 7-8 school children do in average leave a certain "space" for changes (32 %) but most of the changes suggested are individualistically oriented.

Both questions 8 and 9 are fairly openended questions in the sense that they are not related to any particular problem or situation which should be changed. Therefore in question 10 we asked the children about how they consider the problem that some people are rich while others are poor in the same location.

Question no 8: Tell something you would like to change. (In your life, home, location, country and the world)



Question no 9: How can these things be changed?

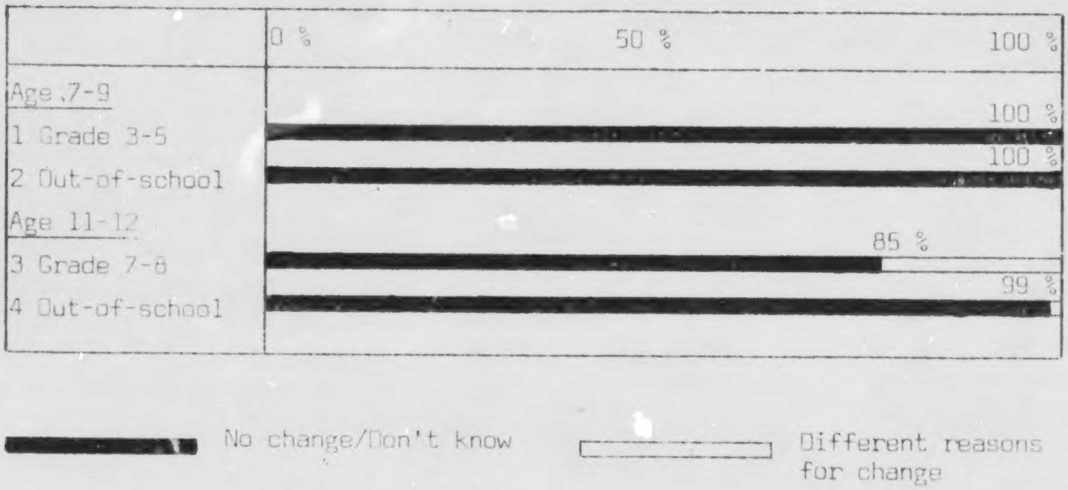
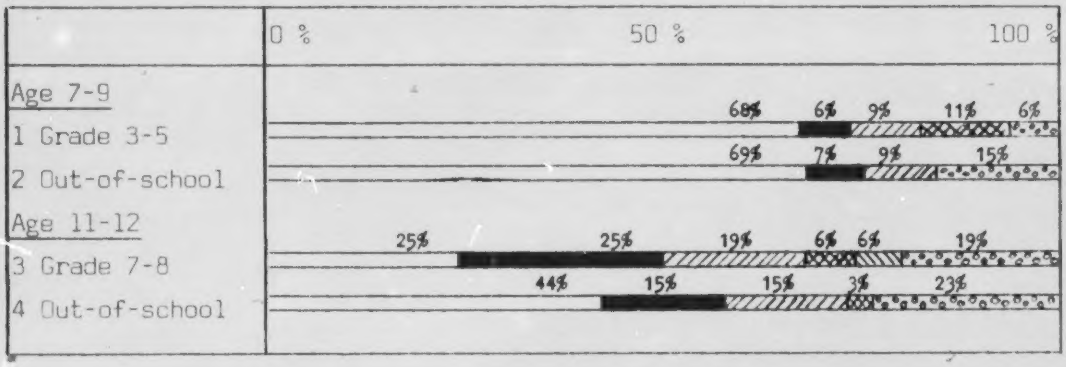


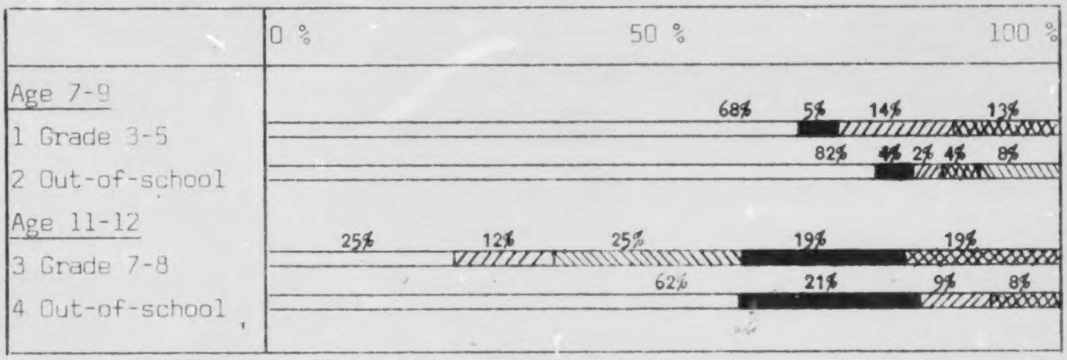
Figure 16 The percentage distribution of the answers about ideas of changes among school children and out of school children

Question no 10: In a village usually some people are rich while others are poor.

a) Why is it so?



b) How can that be changed?



| | | | |
|---|---|---|---|
| ▭ | Don't know/Impossible | ■ | Due to God |
| ▨ | Education | ▩ | Individual efforts (e g hard work, help others etc) |
| ▧ | Structural reasons/ changes (economic system, Islamic system etc) | ░ | Others (tolerance, family planning, lack of money etc) |

Figure 17 The percentage distribution of the answers of out-of-school and school children

Again we see that for the lower ages there is not much difference between the school children and the out-of-school children but the longer they stay in school the greater is the difference between the two groups. A few of the grade 7-8 school children do even give some structural reasons (economical system, unemployment etc.) for the unjust situation the question is referring to.

Concerning the attitudes of the children to various authorities (question 11) there is a difference in the distribution of the alternative answers "yes" and "no" even between the lower age groups. In the figure below the answers to the questions if different authorities "can do wrong things" are reported.

| | Age 7-9 | | Age 11-12 | |
|---|---|---|---|---|
| | In school | Out-of-school | In school | Out-of-school |
| Can your mother do wrong things? | 64% | 38% | 75% | 44% |
| Can your father do wrong things? | 61% | 42% | 81% | 38% |
| Can the Chaudry do wrong things? | 62% | 40% | 94% | 44% |
| Can the Government do wrong things? | 44% | 18% | 63% | 32% |
| Can Allah do wrong things? | 2% | 7% | 0 | 0 |
| Can you do wrong things? | 76% | 44% | 94% | 53% |

Figure 18 The percentage distribution of the "yes" response among out-of-school and school children

Although Allah can do wrong things only according to the lower age groups, and among them more in the out-of-school- than the in-school-group, still only 44 % of the children in out-of-school group are of the opinion that they themselves can do wrong things!

The over all picture is clear, however. The school children seem to be more realistic in their attitudes towards the various authorities. They realize that even leaders and the government can make mistakes. On the other hand, the concept Allah is considered to be above the judgement of a human being, naturally, as it is a concept belonging to the religious dimension which is above all sorts of cognitive stages.

As for the children's ideas about the norms in their society, no pronounced difference can be found in the answers (see questions 12 and 13 in the appendices 2b-e), although the out-of-school children do slightly more often respond "don't know" than the school children.

## The adults

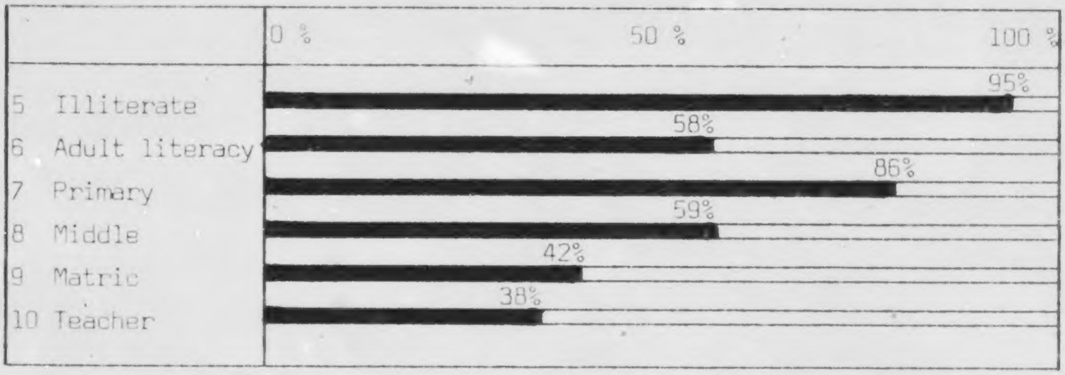
The adults were asked some of the questions that the children were asked, but in addition to that they were also requested to respond to certain statements about belief orientation and questions about influence and power. The basic information about the answers in the interview schedule is to be found in the appendices (2f-k). Here we will discuss some general traits in the answers given.

As before, the adults have been grouped according to their degree of education. The information about the subgroups seems to indicate that the degree of education is accompanied by a greater opportunity to travel, more geographical, political and scientific knowledge but fewer children (see questions 3-6 in the appendices 2f-k). Again, this statement is given on a weak basis of knowledge which is not claimed to be representative of the over all situation in Pakistan.

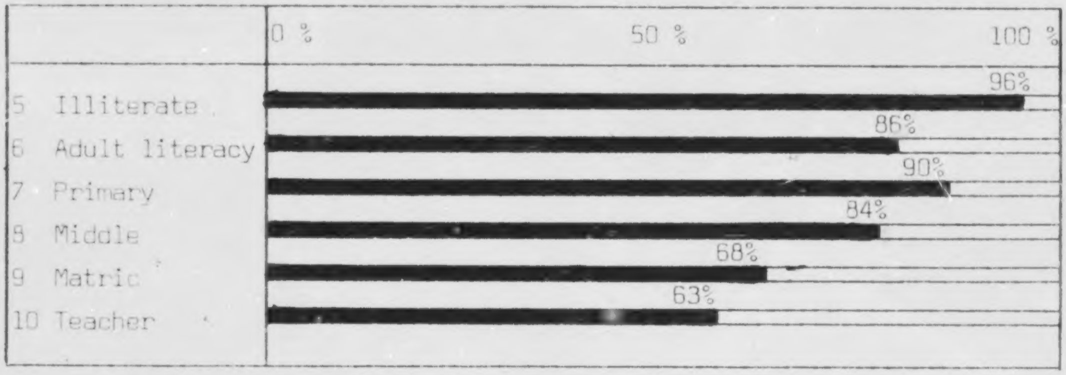
The attitudes towards change were investigated among the adults in the same way as among the children. In figure 19 the response pattern of the adults is presented.

In the below figure a clear trend is revealed: With more education the subjects mention more things which they think ought to be changed as well as more ideas about how these things could be changed.
In connection with the answers given to the questions 9a-b, (fig. 20) (why some people are rich while others are poor and how economic inequality could be changed) the ideas of the interviewed subjects will be presented more in detail.

Question no 7: Tell something you would like to change. (In your life, home, location, country and the world)



Question no 8: How can that be changed?



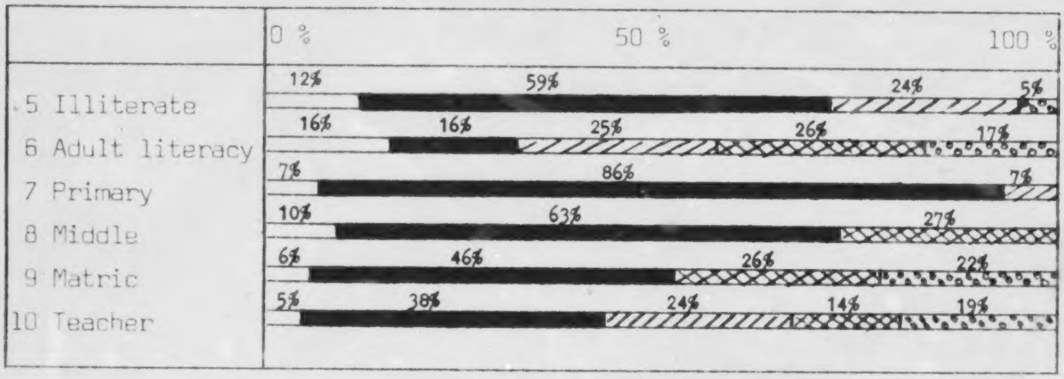
▬ No change/Don't know

▭ Different reasons for change

Figure 19 The percentage distribution of the answers from adults with different educational background

Question no 9: In a village usually some peopel are rich while others are poor.

a) Why is it so?



b) How can that be changed?

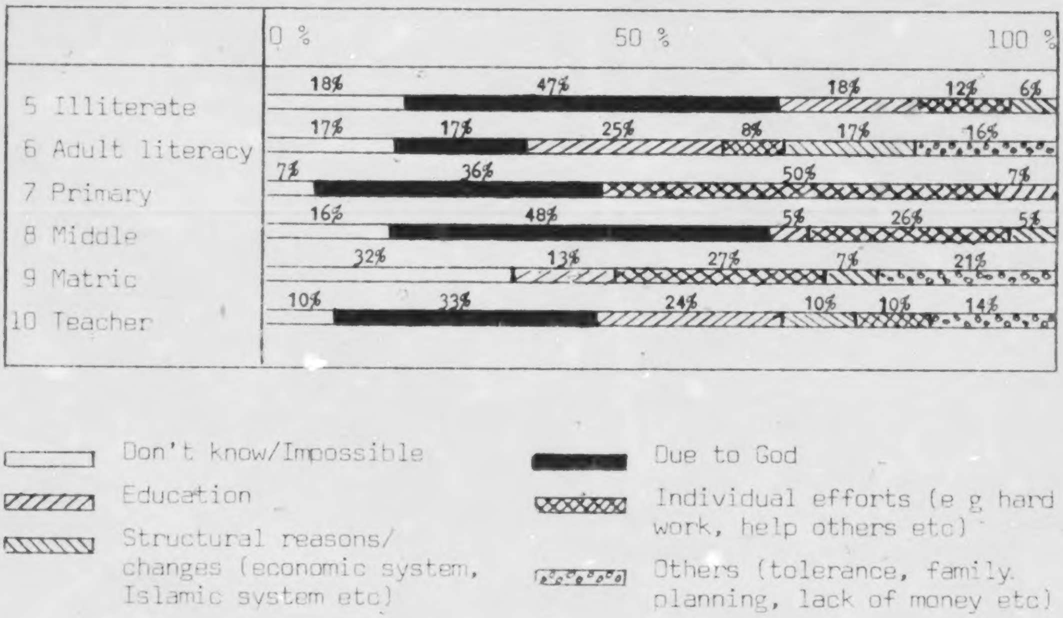


Figure 20 The percentage distribution of the answers from adults with different educational background

The percentage distributions of the various categories of answers over the sub groups reveal some interesting traits. The subjects from different subgroups cover almost totally the "space" for various reasons but the relations between causes given differ. There is obviously a trend that the reason "Due to God" decreases as the amount of education increases (Again this is revealed sharply if we compare the illiterate and those from literacy courses). This trend, however, is not so clear in the pattern of the answers to question 9b about how things could be changed.

Besides "God" mostly individualistic reasons and education are given as causes for the prevailing unjust situation as well as means for changing it.

The answers to the question how people can cooperate to make things better (question no. 10) and about what kind of norms people should follow (questions 11 and 12) indicate no clear differences among the sub groups. The norms mentioned, prescribe that you must not steal, lie or abuse others, but do good deeds, get an education, help others and obey the law and the government.

When we described the general socio-cultural background of the Pakistani village we mentioned the existance of various sorts of supernatural belief - in evil as well as in good "spirits". In question 13 we made various statements referring to such circumstances and asked the subjects to tell us if they agreed to the statements given. Below are the percentage distributions of the answers given.

We found again a rather sharp decline tendency in the "yes" responses between the illiterate and those from literacy courses. This trend, however, cannot be found at the "higher" stages of education, although there is a rather clear decreasing tendency in some of the questions, like f and b.

But first of all question 13 reveals the very common existence of supernatural belief even among those who have got quite a good education. Of course a "yes" response to statements like a and b might have a negative impact on what within a Western way of thinking would be called realistic responsibility. Still, it is not our intention to value these attitudes but only to notice their existence.

| Do you agree to the following statements? | Illiterate N = 17 | Literacy courses N = 15 | Primary N = 14 | Middle N = 19 | Matric N = 15 | Teacher N = 21 | Total N = 101 |
|---|---|---|---|---|---|---|---|
| a) Children are gifts of God. Every child that takes birth brings his own Rizaq. So it is absolutely ridiculous to worry about the support of children or their increasing number. | 82% | 50% | 79% | 63% | 47% | 48% | 62% |
| b) The way human beings will pass their lives on this earth and the pleasure and pains that they will experience, all has been decided by God long before their birth. Human efforts simply cannot change His decisions. | 76% | 42% | 72% | 42% | 53% | 24% | 52% |
| c) A spell of an evil spirit (Charail or Bhoot) can never be undone with the medicines of a doctor. | 88% | 42% | 50% | 58% | 60% | 67% | 61% |
| d) Not only children but even objects and cattle are prey to the evil eye. All can be made sick or damaged by the simple gaze of the person possessing the evil eye. | 82% | 42% | 64% | 68% | 60% | 67% | 64% |
| e) One can get rid of fever and other human ailments by the use of Taaveez. | 52% | 17% | 36% | 63% | 13% | 46% | 38% |
| f) One should follow the acts of one's forefathers without examining their goodness or badness. | 29% | 33% | 14% | 21% | 0 | 0 | 16% |
| M | 69% | 36% | 56% | 53% | 36% | 42% | 49% |

Figure 21 The percentage distribution of the "yes" responses among different sub-groups

The responses to the question (no. 14) "Who decides how many children there will be in a family?", do not reveal any remarkable differences between the sub groups, neither do the patterns of answers to questions 15-17 about who decides and who have got the greatest power or influence.

The authority of the Chaudry, the landlord who traditionally has got the most influential position in a village, seems to decrease with higher education. Yet, also those with very little amount of education do not consider him very important either.

Most of the adults want their own children to get education to a rather high level (Question no. 18). There is however, a clear tendency saying, that parents with a high education want their children to have a higher education more often than those parents with a low education. This is natural. Even if the question was asked so as to leave room for wishful thinking, the poorer parents answers to the problem why they wanted their children to get education were: "Cannot afford more" i. e. the hard economic facts could not be hidden.

## Discussion

We have seen above that there are certain relations between the pattern of responses on questions about social change and education. Naturally it would be interesting to validate the tests concerning cognitive aspects in relation to the attitudes towards change. We have chosen to do so with one of our test, Multiple Ordering, because it is a non-verbal test and therefore less cultural biased than the others, at least as far as the instructions are concerned.

In multiple ordering we tested the childrens' ability to operate with a two dimensional spatial pattern "in their head". The coding of their problem solving capacity was not dependent on overt verbal responses. On a common sense ground we expected a relation between success in operating with two dimensional patterns and complex problem solving in any cultural setting.

The responses on multiple ordering were categorized in five levels (A-E). The five levels go from : No serial organized conception (Level A) to a fully Reversible organized conception in two dimensions (Level E) with the transitional stages B.C.D (see p. 37).

We are now in a position to validate this logically derived expectations against the childrens' responses to questions concerning social change.

A relation between success on multiple ordering and attitudes towards social change would mean that there would be a gradual increase in comprehended alternatives to the social situation from level A to level E.

To test this hypothesis we grouped the children according to A to E answers, independent of age, grade and in - or out-of-school, and calculated the distribution of their answers to four questions about social change.

| Question 8: Tell something you would like to change? | | | | 9: How can that be changed? | |
|---|---|---|---|---|---|
| **Cat.** | **No.** | **Don't know/ No answer** | **Different reasons for change** | **Don't know/ No answer** | **Different reasons for change** |
| A | 12 | 100% | - | 100% | - |
| B | 26 | 100% | - | 100% | - |
| C | 67 | 96% | 4% | 95% | 5% |
| D | 21 | 100% | - | 100% | - |
| E | 68 | 84% | 16% | 78% | 22% |
| Total | 194 | | | | |

Question 10: In a village usually some people are rich while others are poor.

| | | a) Why is it so? | | | b) How can that be changed? | | |
|---|---|---|---|---|---|---|---|
| **Cat.** | **No.** | **Don't know/ No answer** | **Due to God** | **Different reasons** | **Don't know/ Impossible** | **Due to God** | **Different reasons** |
| A | 12 | 92% | - | 8% | 100% | - | - |
| B | 26 | 62% | 11% | 27% | 84% | 8% | 8% |
| C | 67 | 71% | 6% | 23% | 82% | 6% | 12% |
| D | 21 | 55% | 10% | 35% | 60% | 10% | 30% |
| E | 68 | 43% | 11% | 46% | 51% | 11% | 35% |
| Total | 194 | | | | | | |

Figure 22 The percentage distribution of different answers among school- and out-of-school children divided on categories A-E according to the test Multiple Ordering

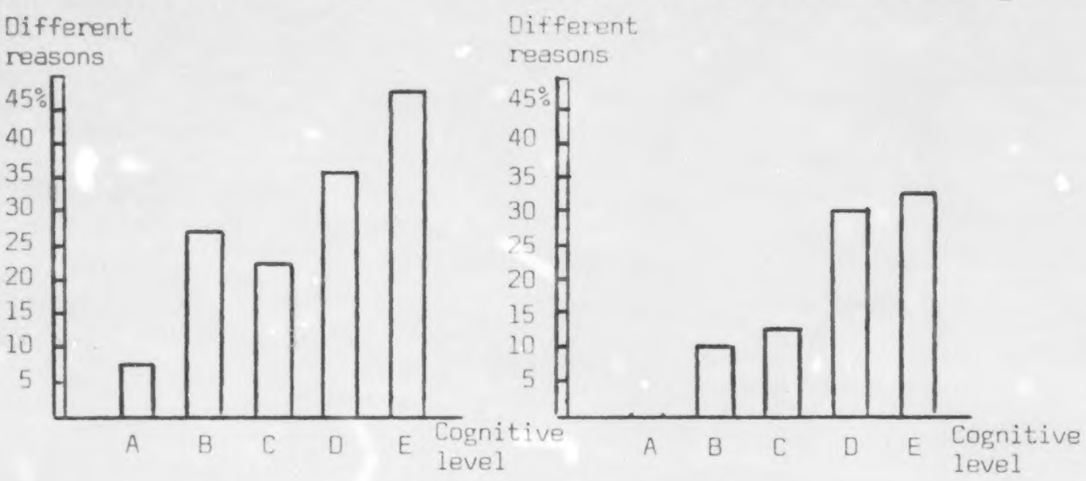


Figure 23 Diagram based on question no. 10 in Figure 22

The over all picture in figure 22 is clear. It shows that there is not much "space" given for social change in the childrens' comprehension of the world (questions 8 and 9). From level A-D (with the exception of C) the children do not know anything they would like to change. But for level E the responses include some ideas both about what they wanted to be changed as well as how it could be changed.

Concerning the question about why some people are rich while others are poor the response pattern indicates a tendency: there is a positive relationship between the levels A-E and the childrens' comprehension of the socio-economic situation. With higher level follows an increasing number of ideas both about causes for the prevailing situation and about how it could be changed.

Concerning the reasoning "Due to God" there is not to be found any clear difference in the response pattern. This is in accord with the results in figure 17 where the answers are related to education and age.

Keeping in mind, that we are discussing the results from a rather limited number of subjects in a pilot study, still, when we validate the results from one of our test on cognitive growth in relation to the responses to some questions on social change, we obtain a picture that obviously reveals some understandable relationships.

## Summary

What can be learnt from this pilot study?

In a very narrow sense we have learnt that the problems we asked through our test and interview formulars are answerable. We have data that make sense from an "outside" point of view. We have also learnt that the social and material context in which these questions were asked made them seem a bit extravagant. We have also learnt that testing conditions can not be kept under control to the extent that we usually take for granted in ordinary research.

The over all result shows that schooling has a noticeable effect on cognitive growth - i e as it is comprehended in the Western domain. In relation to grade most of the "positive" variables increase with years of schooling. This relation also holds for geographical and scientific knowledge - which of course is not too surprising. Of more principle interest is that the attitude towards external authorities changes with years of schooling. This is shown very clearly in the item where we asked: Why are some rich and why are some poor? With more years of schooling there are a higher proportions of alternatives for changing the situation.

There are no differences between the out of school groups and the in school groups as concerns behaviour in social life.

Among the adults we find that the level of education is accompanied by greater opportunity to travel, more geographical, political and scientific knowledge and with fewer children. As concerns the attitude to social change there is a marked relation between the "space" given to various arguments for change and level of education (Questions no 7 and 8, p. 59). There is also a clear trend saying that the reason "Due to God" as an explaining factor to social injustice is decreasing with the amount of education (question no 9, p. 60).

There seems to be a very marked influence of literacy courses on attitude to social change. The adult literacy group as compared with the adult illiterate group is in a substantial way oriented towards the possibility of change. Their reasons for initiating change shows a marked belief in individual strivings and in education (question no 9, p. 60). These short courses seem to open new possibilities in their way of thinking as concerns the possibility of social change.

In a broader sense we are dealing with aspects of the very basic question of whether it is possible to change an established society with the help of education. The answer is, of course, dependent upon the reasons a certain society has for establishing a chool system on the one hand and the kind of knowledge and attitudes reinforced by this system on the other.

Henry (1960) states, that seen in the historical perspective, the following conditions have summoned the school into existence: the development of religious institutions with the aim of training a priesthood, conquests requiring the preparation of civil and military administrators, the division of labour calling for instruction in special techniques, and conflicts within societies which threaten traditional values and beliefs leading to the use of education to reinforce acceptance of the heritage. Therefore, especially in accord with the last purpose, established stable societies condition their members "to act, think and perceive in what the anthropoligist calls a culturally delimited universe - consisting of the world that the culture itself has created and those aspects of the physical universe that it has chosen to find significant" (ibid. p. 83).

The education process serving the purpose of preventing change or conflict thus actually narrows "the child's perceptual field by training the child to dismiss from his mind anything not selected for his perception by the culture" (ibid. p. 275). As knowledge serving the above stated purpose increases, "ignorance tends to increase in individuals for these come to know less and less of the total available information" (ibid. p. 296).

Increased adjustment in an existing unequal society obviously does not facilitate general development, but rather "multilinear evolution", meaning the adjustment of each distinct culture to its specific physical environment, or what Geertz (1963) calls "involution", meaning a process of increasing complexity and refinement of all forms of social and economic relations. This type of "development", sometimes also called "specific" development, often means growth in the feeling of security and of being protected which leads to an increased readiness to accept the established hierarchic structure. Therefore the progression of specific evolution is conversely related to the general development potential.

According to Wertheim (1972), a society which experiences higher developmental potential but does not want to experience social liberation often limits education and knowledge to a few. In answer to the basic questions of how education can be formed to serve as a means for changing an existing society, it first of all has to be made available to the masses of the people. The second answer is related to the type of knowledge and attitudes that the educational process reinforces.

The only kind of knowledge which can be valid in the context of serving change or liberation is the one which comes from an analysis of the existing socio-economic structure and of the present allocational alternative choices first in the local community and then in the more macro types of system of which the local society is only one unit.

The process of change, of course, takes place within a natural framework, but the limits of this framework seem to be expanding as an effect of the availability of new information which in turn may lead to a re-examination of basic postulates.

In his cognitive processes at a lower level man seems to a great extent to answer the demands and expectations of the surrounding environment. However, cognitive behaviour on higher levels also means a striving to adapt the surroundings to humans or "humanitarian" behaviour, which may lead to a questioning of the established criteria for conformity and different defences of inequality. Thus cognition and ethics become inseparable.

But unfortunately, poverty, ignorance, inequality make for very low-voiced resistance against misuse and extravagances in human capital.

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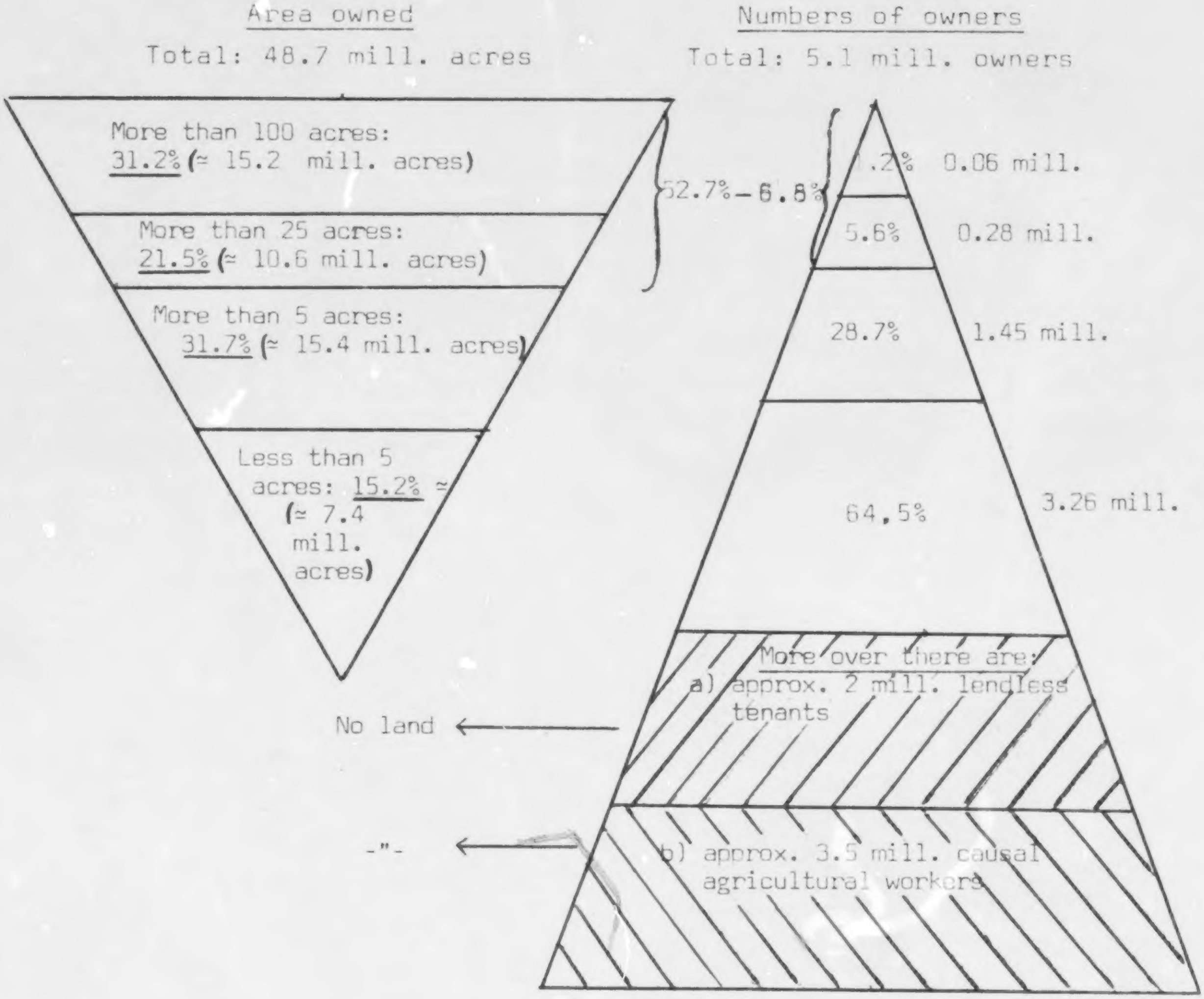
# APPENDICES

## The structure of landownership in Pakistan

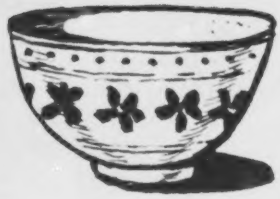
(1963/64 Cencus data)

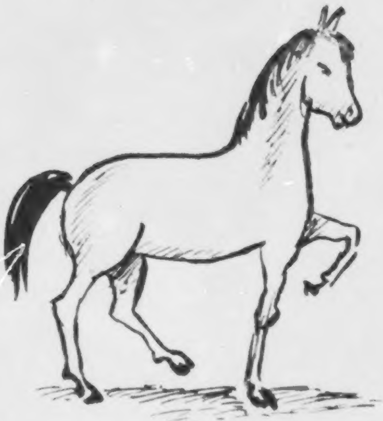

Area owned
Total: 48.7 mill. acres
More than 100 acres:
31.2% (≈ 15.2 mill. acres)
More than 25 acres:
21.5% (≈ 10.6 mill. acres)
More than 5 acres:
31.7% (≈ 15.4 mill. acres)
Less than 5 acres: 15.2% ≈ (≈ 7.4 mill. acres)
52.7% — 6.8%
No land
-"-
Numbers of owners
Total: 5.1 mill. owners
1.2% 0.06 mill.
5.6% 0.28 mill.
28.7% 1.45 mill.
64,5% 3.26 mill.
More over there are:
a) approx. 2 mill. lendless tenants
b) approx. 3.5 mill. causal agricultural workers

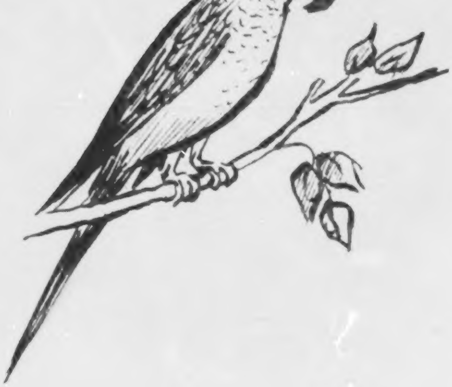
Total labor force employed in agriculture above age 10 ≈ 10 mill.

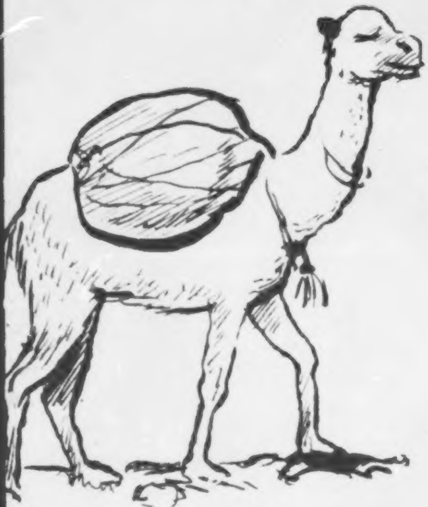
Sources: Nulty, L, 1972 The green revolution in West Pakistan Praeger, New York.
Ahmad, S.Q. 1974 Land Reforms by the People's Government in Pakistan after 1971. Pakistan, National Centre, Islamabad.

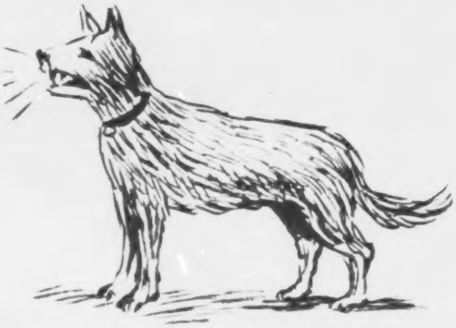
Appendix 1b

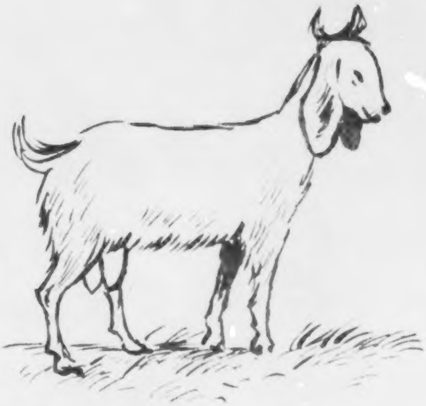


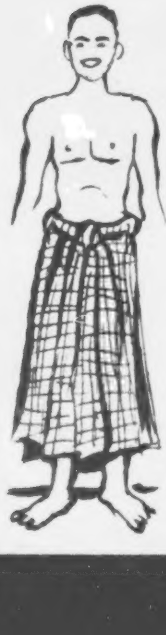


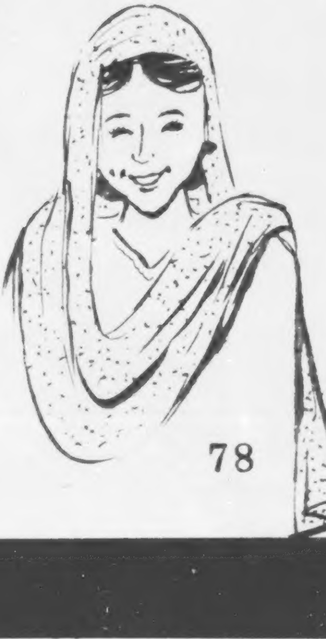


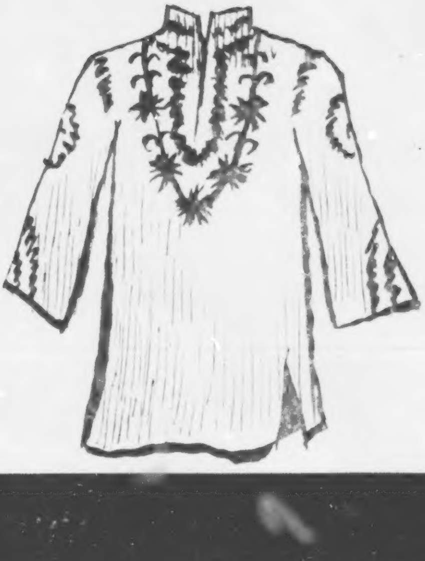




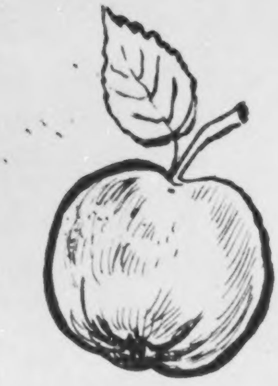


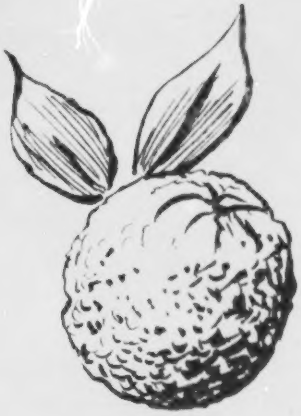


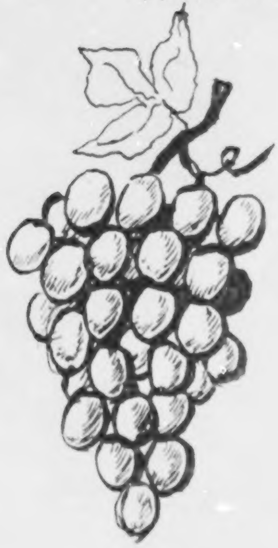


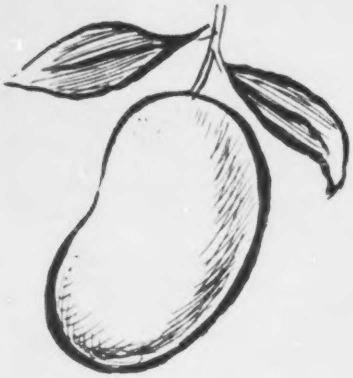


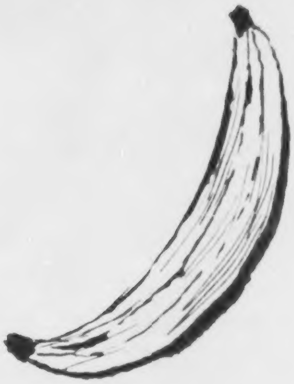
Appendix 1b

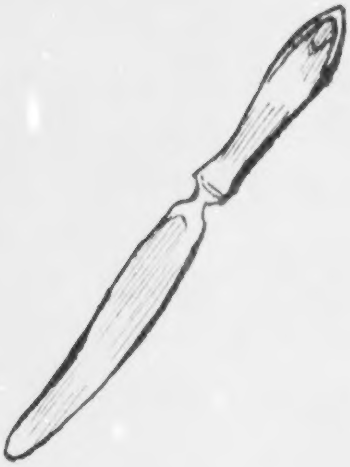


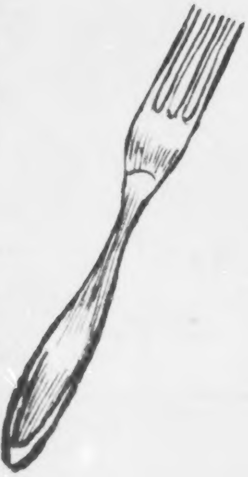


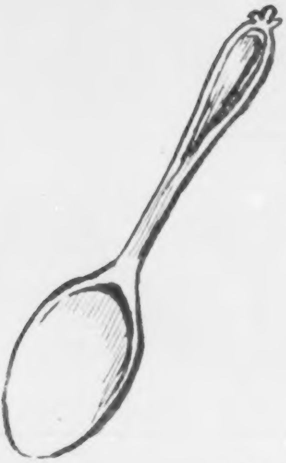


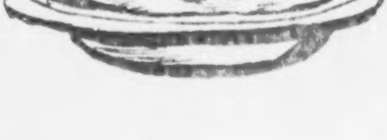












CHILDREN

Appendix 2a
N=32

# School-children, Grade I and II (Male 16, Female 16)

1. Average number of brothers and sisters: 5,1

2. Longest journey:

| None | Nearest town | Far off city | Abroad. |
|---|---|---|---|
| 16% | 53% | 31% | |

3. Knowledge about their family 4,4 1)

| | Can give a name | Can't give a name |
|---|---|---|
| 4 Have you any books at home? Give the name of one: | 59% | 41% |
| " " " newspaper " ? " " " ": | 3% | 97% |

5. Occupation the children would like to have.

| Don't know | Professionals | Bu ssiness | Labourer | House Wife |
|---|---|---|---|---|
| 19% | 63% | 9% | 3% | 6% |

6. Geographical and political knowledge 0,9 2) (Average)

7. Scientific knowledge.

| | No answer | Don't know | By God | Right |
|---|---|---|---|---|
| What is the shape of the earth? (draw it) | | 97% | | 3% |
| Why does the sun rise? | | 100% | | |
| Why does not a man fall of the earth? | | 94% | 6% | |

Attitudes towards change.

8. Tell something you would like to change:

| | Don't know/ No answer/ No change | New House | Islamic system | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|---|
| a) In your home | 97% | | | | | 3% |
| b) In the location | 27% | | | 3% | | |
| c) In the country | 97% | | | 3% | | |
| d) In the world | 97% | | | | | 3% |

9. How can these things be changed?

| | Don't know No change | New house | Get Education | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|---|
| a) In your home | 97% | | | 3% | | |
| b) In the location | 100% | | | | | |
| c) In the country | 100% | | | | | |
| d) In the world | 100% | | | | | |

10. In a village usually some people are rich while others are poor

Why is it so?

| Don't know | Due to God | Education | Individual | Structural | Others |
|---|---|---|---|---|---|
| 81% | | 3% | 3% | | 12% |

How can that be changed?

| Don't know Impossible | Due to God | Education | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|
| 91% | 3% | 3% | 3% | | |

Notes: See next page'

Norms people should follow.

11. Who decides in your home?

| Don't know | Father | Mother | Elders | Others |
|---|---|---|---|---|
| | 56% | 32% | 13% | |

| | Yes | No | Don't know |
|---|---|---|---|
| Can your mother do wrong things? | 41% | 59% | |
| Can your father do wrong things? | 53% | 44% | 3% |
| Can the Chaudhry do wrong things? | 50% | 44% | 6% |
| Can the Government do wrong things? | 28% | 50% | 22% |
| Can Allah do wrong things? | | 100% | |
| Can you do wrong things? | 59% | 41% | |

12. What people should do to be a good member of the community.

| Don't know | Hard work | Get education | Pious | Saying prayers | Others |
|---|---|---|---|---|---|
| 56% | 13% | 10% | 15% | 6% | |

13. What people should not do to be a good member of the community.

| Don't know | Stealing | Commit evils | Tell lies | Others |
|---|---|---|---|---|
| 75% | 3% | 10% | | 12% |

14. Answers given to the question (after the tests and the interview) "Why do you think we ask these questions"

| Don't know | Measure achievement | Test intelligence | For education | Others |
|---|---|---|---|---|
| 68% | 16% | 16% | | |

Notes:

1) Maximum 6 points for knowing the names of parents and grandparents and the occupation of father and grandfather.

2) Maximum 6 points for knowing the names of the country and the Prime Minister and other countries sharing the border with Pakistan.

## CHILDREN

Appendix 2b
N=66

## School-children, Grade III, IV and V (Male 33, Female 33)

1. Average number of brothers and sisters: 6.0

2. Longest journey:

| None | Nearest town | Far off city | Abroad. |
|---|---|---|---|
| 6% | 23% | 70% | 1% |

3. Knowledge about their family 4.3 1)

4. Have you any books at home? Give the name of one:
" " " newspaper " ? " " " " ":

| | Can give a name | Can't give a name |
|---|---|---|
| books | 85% | 15% |
| newspaper | 30% | 70% |

5. Occupation the children would like to have.

| Don't know | Professionals | Bussiness | Labourer | House Wife |
|---|---|---|---|---|
| 14% | 79% | | 3% | 5% |

6. Geographical and political knowledge 2.7 2) (Average)

7. Scientific knowledge.

| | No answer | Don't know | By God | Right |
|---|---|---|---|---|
| What is the shape of the earth? (draw it) | | 55% | | 45% |
| Why does the sun rise? | | 100% | | 0% |
| Why does not a man fall of the earth? | | 89% | | 11% |

Attitudes towards change.

8. Tell something you would like to change:

| | Don't know/ No answer/ No change | New House | Islamic system | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|---|
| a) In your home | 92% | | | 8% | | |
| b) In the location | 97% | | | 4% | | |
| c) In the country | 98% | | | 2% | | |
| d) In the world | 100% | | | | | |

9. How can these things be changed?

| | Don't know No change | New house | Get Education | Individual Efforts | Structural changes | Others |
|---|---|---|---|---|---|---|
| a) In your home | 98% | | 2% | | | |
| b) In the location | 98% | | | 2% | | |
| c) In the country | 98% | | | 2% | | |
| d) In the world | 100% | | | | | |

10. In a village usually some people are rich while others are poor
Why is it so?

| Don't know | Due to God | Education | Individual | Structural | Others |
|---|---|---|---|---|---|
| 68% | 6% | 9% | 13% | | 5% |

How can that be changed?

| Don't know Impossible | Due to God | Education | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|
| 68% | 5% | 14% | 14% | | |

**Notes: See next page'**

Norms people should follow.

11. Who decides in your home?

| Don't know | Father | Mother | Elders | Others |
|---|---|---|---|---|
|  | 55% | 20% | 23% | 3% |

|  | Yes | No | Don't know |
|---|---|---|---|
| Can your mother do wrong things? | 64% | 36% |  |
| Can your father do wrong things? | 61% | 36% | 3% |
| Can the Chaudhry do wrong things? | 62% | 27% | 11% |
| Can the Government do wrong things? | 44% | 47% | 9% |
| Can Allah do wrong things? | 2% | 98% |  |
| Can you do wrong things? | 76% | 24% |  |

12. What people should do to be a good member of the community.

| Don't know | Hard work | Get education | Pious | Saying prayers | Others |
|---|---|---|---|---|---|
| 24% | 3% | 27% | 11% | 5% | 30% |

13. What people should not do to be a good member of the community.

| Don't know | Stealing | Commit evils | Tell lies | Others |
|---|---|---|---|---|
| 45% | 5% | 14% | 8% | 28% |

14. Answers given to the question (after the tests and the interview) "Why do you think we ask these questions"

| Don't know | Measure achievement | Test intelligence | For education | Others |
|---|---|---|---|---|
| 38% | 35% | 18% | 6% | 4% |

Notes:

1) Maximum 6 points for knowing the names of parents and grandparents and the occupation of father and grandfather.

2) Maximum 6 points for knowing the names of the country and the Prime Minister and other countries sharing the border with Pakistan.

## CHILDREN

Appendix 2c

School-children, Grade VII and VIII (Male & Female) N=16

1. Average number of brothers and sisters: 6,4

2. Longest journey:

| None | Nearest town | Far off city | Abroad. |
|---|---|---|---|
| 69 |  | 88% | 6% |

3. Knowledge about their family 4,6 1)

4.

|  | Can give a name | Can't give a name |
|---|---|---|
| Have you any books at home? Give the name of one: | 100% |  |
| " " " newspaper " ? " " " " ": | 63% | 37% |

5. Occupation the children would like to have.

| Don't know | ProfessionalsBu | ssiness | Labourer | House Wife |
|---|---|---|---|---|
| 13% | 81% |  |  | 6% |

6. Geographical and political knowledge 2,8 2) (Average)

7. Scientific knowledge.

|  | No answer | Don't know | By God | Right |
|---|---|---|---|---|
| What is the shape of the earth? (draw it) |  |  |  | 100% |
| Why does the sun rise? |  | 69% | 6% | 25% |
| Why does not a man fall of the earth? |  | 69% |  | 31% |

Attitudes towards change.

8. Tell something you would like to change:

|  | Don't know/ No answer/ No change | New House | Islamic system | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|---|
| a) In your home | 69% | 13% |  | 6% | 6% | 6% |
| b) In the location | 69% |  |  | 31% |  |  |
| c) In the country | 69% |  | 13% |  |  | 12% |
| d) In the world | 81% |  |  |  | 19% |  |

9. How can these things be changed?

|  | Don't know No change | New house | Get Education | Individual Efforts | Structural changes | Others |
|---|---|---|---|---|---|---|
| a) In your home | 88% |  |  | 12% |  |  |
| b) In the location | 63% |  | 6% |  | 31% |  |
| c) In the country | 88% |  |  |  |  | 12% |
| d) In the world | 100% |  |  |  |  |  |

10. In a village usually some people are rich while others are poor

Why is it so?

| Don't know | Due to God | Education | Individual | Structural | Others |
|---|---|---|---|---|---|
| 25% | 25% | 15% | 12% | 12% | 6% |

How can that be changed?

| Don't know Impossible | Due to God | Education | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|
| 25% | 19% | 12% | 19% | 25% |  |

Notes: See next page.

Norms people should follow.

11. Who decides in your home?

| Don't know | Father | Mother | Elders | Others |
|---|---|---|---|---|
| | 33% | 18% | 20% | 12% |

| | Yes | No | Don't know |
|---|---|---|---|
| Can your mother do wrong things? | 75% | 25% | |
| Can your father do wrong things? | 81% | 19% | |
| Can the Chaudhry do wrong things? | 94% | 6% | |
| Can the Government do wrong things? | 63% | 37% | |
| Can Allah do wrong things? | | 100% | |
| Can you do wrong things? | 94% | 6% | |

12. What people should do to be a good member of the community.

| Don't know | Hard work | Get education | Pious | Saying prayers | Others |
|---|---|---|---|---|---|
| 6% | 23% | 12% | 6% | 29% | 24% |

13. What people should not do to be a good member of the community.

| Don't know | Stealing | Commit evils | Tell lies | Others |
|---|---|---|---|---|
| 6% | 31% | 38% | 13% | 12% |

14. Answers given to the question (after the tests and the interview) "Why do you think we ask these questions"

| Don't know | Measure achievement | Test intelligence | For education | Others |
|---|---|---|---|---|
| 31% | 19% | 31% | 6% | 12% |

Notes:

1) Maximum 6 points for knowing the names of parents and grandparents and the occupation of father and grandfather.

2) Maximum 6 points for knowing the names of the country and the Prime Minister and other countries sharing the border with Pakistan.

# CHILDREN

Appendix 2d

## Out-of-school 7, 8 and 9 years (Male 21, Female 24)

N=45

1. Average number of brothers and sisters: 6,4

2. Longest journey:

| None | Nearest town | Far off city | Abroad. |
|---|---|---|---|
| 32% | 48% | 18% | 2% |

3. Knowledge about their family 3.7 1)

4. Have you any books at home? Give the name of one: / " " " newspaper " ? " " " "

| | Can give a name | Can't give a name |
|---|---|---|
| Have you any books at home? Give the name of one: | 16% | 84% |
| " " " newspaper " ? " " " " : | 0% | 100% |

5. Occupation the children would like to have.

| Don't know | Professionals | Bussiness | Labourer | House Wife |
|---|---|---|---|---|
| 16% | 16% | 2% | 28% | 38% |

6. Geographical and political knowledge 0.2 2) (Average)

7. Scientific knowledge.

| | No answer | Don't know | By God | Right |
|---|---|---|---|---|
| What is the shape of the earth? (draw it) | | 98% | | |
| Why does the sun rise? | | 73% | 22% | |
| Why does not a man fall of the earth? | | 96% | | |

Attitudes towards change.

8. Tell something you would like to change:

| | Don't know/ No answer/ No change | New House | Islamic system | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|---|
| a) In your home | 98% | 2% | | | | |
| b) In the location | 98% | | | | 2% | |
| c) In the country | 100% | | | | | |
| d) In the world | 98% | 2% | | | | |

9. How can these things be changed?

| | Don't know No change | New house | Get Education | Individual Efforts | Structural changes | Others |
|---|---|---|---|---|---|---|
| a) In your home | 100% | | | | | |
| b) In the location | 100% | | | | | |
| c) In the country | 100% | | | | | |
| d) In the world | 100% | | | | | |

10. In a village usually some people are rich while others are poor

Why is it so?

| Don't know | Due to God | Education | Individual | Structural | Others |
|---|---|---|---|---|---|
| 69% | 7% | 13% | 11% | | 13% |

How can that be changed?

| Don't know Impossible | Due to God | Education | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|
| 82% | 4% | 2% | 6% | 4% | |

Notes: See next page'

## Norms people should follow.

11. Who decides in your home?

| Don´t know | Father | Mother | Elders | Others |
|---|---|---|---|---|
| 9% | 55% | 4% | 4% | 2% |

| | Yes | No | Don´t know |
|---|---|---|---|
| Can your mother do wrong things? | 38% | 62 % | |
| Can your father do wrong things? | 42% | 58 % | 2 % |
| Can the Chaudhry do wrong things? | 40% | 51 % | 9 % |
| Can the Government do wrong things? | 18% | 69 % | 11 % |
| Can Allah do wrong things? | 7% | 91 % | |
| Can you do wrong things? | 44% | 58 % | |

12. What people should do to be a good member of the community.

| Don´t know | Hard work | Get education | Pious | Saying prayers | Others |
|---|---|---|---|---|---|
| 51% | 22 % | 7% | 11 % | 7% | 2 % |

13. What people should not do to be a good member of the community.

| Don´t know | Stealing | Commit evils | Tell lies | Others |
|---|---|---|---|---|
| 69 % | 20 % | 4 % | 2 % | 1 % |

14. Answers given to the question (after the tests and the interview) "Why do you think we ask these questions"

| Don´t know | Measure achievement | Test intelligence | For education | Others |
|---|---|---|---|---|
| 73 % | | | 7% | 8% |

Notes:

1) Maximum 6 points for knowing the names of parents and grandparents and the occupation of father and grandfather.

2) Maximum 6 points for knowing the names of the country and the Prime Minister and other countries sharing the border with Pakistan.

# CHILDREN

## Out-of school: 11 and 12 years (Male 19, Female 15)

Appendix 2e
N = 34

1. Average number of brothers and sisters: 6,4

2. Longest journey:

| None | Nearest town | Far off city | Abroad. |
|---|---|---|---|
| 21% | 38% | 35% | 6% |

3. Knowledge about their family ______ 1)

4. Have you any books at home? Give the name of one:
" " " newspaper " ? " " " " ":

| | Can give a name | Can't give a name |
|---|---|---|
| books | 50% | 50% |
| newspaper | 0 | 100 |

5. Occupation the children would like to have.

| Don't know | Professionals | Bussiness | Labourer | House Wife |
|---|---|---|---|---|
| 9% | 6% | 6% | 38% | 38% |

6. Geographical and political knowledge 1,3p 2) (Average)

7. Scientific knowledge.

| | No answer | Don't know | By God | Right |
|---|---|---|---|---|
| What is the shape of the earth? (draw it) | | 97% | | 3% |
| Why does the sun rise? | | 56% | 44% | |
| Why does not a man fall of the earth? | | 100% | | |

Attitudes towards change.

8. Tell something you would like to change:

| | Don't know/ No answer/ No change | New House | Islamic system | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|---|
| a) In your home | 94% | | | | | |
| b) In the location | 97% | 3% | | 3% | | 3% |
| c) In the country | 100% | | | | | |
| d) In the world | 100% | | | | | |

9. How can these things be changed?

| | Don't know No change | New house | Get Education | Individual Efforts | Structural changes | Others |
|---|---|---|---|---|---|---|
| a) In your home | 97% | | 3% | | | |
| b) In the location | 100% | | | | | |
| c) In the country | 100% | | | | | |
| d) In the world | 100% | | | | | |

10. In a village usually some people are rich while others are poor
Why is it so?

| Don't know | Due to God | Education | Individual | Structural | Others |
|---|---|---|---|---|---|
| 44% | 15% | 15% | 9% | | 18 |

How can that be changed?

| Don't know Impossible | Due to God | Education | Individual efforts | Structural changes | Others |
|---|---|---|---|---|---|
| 56% | 21% | 9% | 9% | | 6% |

NOTES: See next page!

Appendix 2e

## Norms people should follow.

11. Who decides in your home?

| Don't know | Father | Mother | Elders | Others |
|---|---|---|---|---|
| 9% | 59% | 18% | 15% | |

| | Yes | No | Don't know |
|---|---|---|---|
| Can your mother do wrong things? | 44% | 56% | |
| Can your father do wrong things? | 38% | 62% | |
| Can the Chaudhry do wrong things? | 44% | 53% | 3% |
| Can the Government do wrong things? | 32% | 62% | 6% |
| Can Allah do wrong things? | | 100% | |
| Can you do wrong things? | 53% | 47% | |

12. What people should do to be a good member of the community.

| Don't know | Hard work | Get education | Pious | Saying prayers | Others |
|---|---|---|---|---|---|
| 26% | 29% | 12% | 15% | 18% | |

13. What people should not do to be a good member of the community.

| Don't know | Stealing | Commit evils | Tell lies | Others |
|---|---|---|---|---|
| 56% | 6% | 21% | | 18% |

14. Answers given to the question (after the tests and the interview) "Why do you think we ask these questions"

| Don't know | Measure achievement | Test intelligence | For education | Others |
|---|---|---|---|---|
| 68% | | 3% | 15% | 12 |

Notes:

1) Maximum 6 points for knowing the names of parents and grandparents and the occupation of father and grandfather.

2) Maximum 6 points for knowing the names of the country and the Prime Minister and other countries sharing the border with Pakistan.

ADULTS

Appendix 2f

# Adults, Illiterate (Male 7, Female 10)

N=17

1. Average income: 605 RS/month (n=10)
2. Average age: 39.2
3. Average no. of children: 4,9 (only those who have got children)

4. Longest journey:

| None | Nearest town | Far off city | Abroad |
|---|---|---|---|
| 18% | 18% | 64% | 0 |

5. Geographical and political knowledge: 3,8 [1](Average)

6. Scientific knowledge (Why does the sun rise?)

| Don't know/Wrong | By God | Right |
|---|---|---|
| 71% | 29% | 0 |

Attitudes towards change.

7. Tell something you would like to change:

| | Don't know No change | Be rich | Education | Impose Islamic system | Structural Changes | Peace | Others |
|---|---|---|---|---|---|---|---|
| a) In your own life | 82% | 18% | | | | | |
| b) In your home | 100% | | | | | | |
| c) In the location | 94% | | | | | | 6% |
| d) In the country | 100% | | | | | | |
| e) In the world | 100% | | | | | | |

8. How can these things be changed?

| | No change Don't know No answer | By God | Education | Individual Efforts | Co-operation | Others |
|---|---|---|---|---|---|---|
| a) In your own life | 88% | 6% | | 6% | | |
| b) In your home | 94% | | | | 6% | |
| c) In the location | 100% | | | | | |
| d) In the country | 100% | | | | | |
| e) In the world | 100% | | | | | |

9. In a village usually some people are rich while others are poor

Why is it so?

| Don't know | Due to God | Education | Individual Efforts | Structural reasons/ | Others |
|---|---|---|---|---|---|
| 12% | 59% | 24% | | | 6% |

How can that be changed?

| Don't know Impossible | Due to God | Education | Individual Efforts | Structural reasons/ changes | Others |
|---|---|---|---|---|---|
| 18% | 47% | 18% | 12% | 6% | |

10. Ideas about how people can cooperate in order to make things better.

| Don't know/ Impossible | Education | Individual efforts | Cooperation |
|---|---|---|---|
| 71% | 24% | 6% | |

Norms people should follow.

11. What people should do to be a good member of the community.

| Don't know No answer | Do good deeds | Get education | Help others | Obey the law/ Government/ Nation | | Others |
|---|---|---|---|---|---|---|
| 24% | 29% | 10% | 19% | 10% | | 10% |

12. What people should not do to be a good member of the community.

| Don't know No answer | Stealing | Commit evils | Fighting | Others |
|---|---|---|---|---|
| 23% | 23% | 41% | 9% | 5% |

---

1) Maximum 10 points for knowing the names of the Prime Minister and the countries which share borders with Pakistan and the names of the political parties in the country.

## Supernatural belief.

13: Do you agree to the following statements?

| | Statement | Yes | No | Don't know |
|---|---|---|---|---|
| | a) Children are gifts of God. Every child that takes birth brings his own Rizaq. So it is absolutely ridiculous to worry about the support of children or their increasing number. | 82% | 28% | |
| | b) The way human beings will pass their lives on this earth and the pleasure and pains that they will experience, all has been decided by God long before their birth. Human efforts simply cannot change His decisions. | 76% | 34% | |
| | c) A spell of an evil spirit (Charail or Bhoot) can never be undone with the medicines of a doctor. | 88% | 12% | |
| | d) Not only children but even objects and cattle are prey to the evil eye. All can be made sick or damaged by the simple gaze of the person possessing the evil eye. | 82% | 28% | |
| | e) One can get rid of fever and other human ailments by the use of Taaveez.[1] | 52% | 48% | |
| M | | 76% | 30% | |
| | f) One should follow the acts of one's forefathers without examining their goodness or badness, | 29% | 71% | |
| M | | 69% | 31% | |

## Influnce and power.

14. Who decides how many children there will be in a family?

| 1. Don't know No answer | 2. Husband | 3. Husband & Wife | God | Others |
|---|---|---|---|---|
| | 8% | 31% | 61% | |

15. Who decides in your home?

| 1. | 2. | Parents | Mother & Father in law | Others | MYSELF |
|---|---|---|---|---|---|
| | 29% | 24% | | 23% | 24% |

16. Who has got the greatest power or influence in your community.

| 1. | Political leaders | Chaudry | Religious leaders | Rich people | Others |
|---|---|---|---|---|---|
| 29% | 24% | 12% | 6% | 29% | |

17. If you have got problems whose advise are you seeking?

| 1. | Husband | Husband & Wife | Parents | Chaudry | Other relatives | Nobody | Others |
|---|---|---|---|---|---|---|---|
| | 12% | | 12% | 12% | 30% | 18% | 16% |

## About the education of their children.

18. Up to which grade do you think your children should be in the school?

| Don't know No answer | Highest possible | Professional | Higher | Matric | Primary | Depends on God | Relegous |
|---|---|---|---|---|---|---|---|
| 41% | | | 12% | 29% | 6% | | 12% |

19. Reasons given for educating their children.

| Don't know No answer | Good life | Can't afford more | Others |
|---|---|---|---|
| 53% | 12% | 29% | 6% |

20. Ans wers given to the question (after the tests and the interview): "Why do you think we ask these questions?"

| Don't know No answer | Know the trend of mind | Test the intelligence | Others |
|---|---|---|---|
| 70% | 12% | 18% | |

---

[1] Verses from the Koran (or something else written on a small piece of paper) or e.g. a piece of cloth from some holy man.

**ADULTS**

Appendix 2g

# Adult, Litteracy Course, (Male 6, Female 6)

N = 12

1. Average income: 326 RS/month (n=7)

2. Average age: 32,6

3. Average no. of children: 5,6 (only those who have got children)

4. Longest journey:

| None | Nearest town | Far off city | Abroad |
|---|---|---|---|
| 25% | 8% | 59% | 8% |

5. Geographical and political knowledge: ________ 1)(Average)

6. Scientific knowledge (Why does the sun rise?)

| Don't know/Wrong | By God | Right |
|---|---|---|
| 50% | 50% | 0 |

Attitudes towards change.

7. Tell something you would like to change:

| | Don't know No change | Be rich | Education | Impose Islamic system | Structural Changes | Peace | Others |
|---|---|---|---|---|---|---|---|
| a)In your own life | 25% | 34% | 25% | | | | 16% |
| b)In your home | 25% | | | | | | |
| c)In the location | 83% | | | | | | 17% |
| d)In the country | 75% | | | | | 17% | 8% |
| e)In the world | 83% | | | | | 17% | |

8. How can these things be changed?

| | No change Don't know No answer | By God | Education | Individual Efforts | Co-operation | Others |
|---|---|---|---|---|---|---|
| a)In your own life | 75% | 17% | | 8% | | 33% |
| b)In your home | 19% | | | | | |
| c)In the location | 83% | | | | 17% | |
| d)In the country | 100% | | | | | |
| e)In the world | 100% | | | | | |

9. In a village usually some people are rich while others are poor

Why is it so?

| Don't know | Due to God | Education | Individual Efforts | Structural reasons/ | Others |
|---|---|---|---|---|---|
| 17% | 17% | 25% | 8% | 17% | 16% |

How can that be changed?

| Don't know Impossible | Due to God | Education | Individual Efforts | Structural reasons/ changes | Others |
|---|---|---|---|---|---|
| 58% | | 17% | 25% | | |

10. Ideas about how people can cooperate in order to make things better.

| Don't know/ Impossible | Education | Individual efforts | Cooperation | Due to God |
|---|---|---|---|---|
| 58% | 25% | | | 17% |

Norms people should follow.

11. What people should do to be a good member of the community.

| Don't know No answer | Do good deeds | Get education | Help others | Obey the law/ Government/ nation | Others |
|---|---|---|---|---|---|
| 8% | 34% | 25% | | 16% | 17% |

12. What people should not do to be a good member of the community.

| Don't know No answer | Stealing | Commit evils | Fighting | Others |
|---|---|---|---|---|
| 8% | 51% | 25% | | 16% |

---

1) Maximum 10 points for knowing the names of the Prime Minister and the countries which share borders with Pakistan and the names of the political parties in the country.

Appendix 2g

Supernatural belief.

13. Do you agree to the following statements?

| | Yes | No | Don´t know |
|---|---|---|---|
| a) Children are gifts of God. Every child that takes birth brings his own Rizaq. So it is absolutely ridiculous to worry about the support of children or their increasing number. | 50% | 50% | |
| b) The way human beings will pass their lives on this earth and the pleasure and pains that they will experience, all has been decided by God long before their birth. Human efforts simply cannot change His decisions. | 42% | 58% | |
| c) A spell of an evil spirit (Charail or Bhoot) can never be undone with the medicines of a doctor. | 42% | 58% | |
| d) Not only children but even objects and cattle are prey to the evil eye. All can be made sick or damaged by the simple gaze of the person possessing the evil eye. | 42% | 58% | |
| e) One can get rid of fever[1] and other human ailments by the use of Taaveez. | 17% | 83% | |
| M | 39% | 61% | |
| f) One should follow the acts of one´s forefathers without examining their goodness or badness, | 33% | 59% | 8% |
| M | 36% | 63% | 1% |

Influnce and power.

14. Who decides how many children there will be in a family?

| 1. Don't know No answer | 2. Husband | 3. Husband & Wife | God | Others |
|---|---|---|---|---|
| | 8% | 59% | 33% | |

15. Who decides in your home?

| 1. | 2. | Parents | Mother & Father in law | Others | MYSELF |
|---|---|---|---|---|---|
| | 33% | 42% | | | 25% |

16. Who has got the greatest power or influence in your community.

| 1. | Political leaders | Chaudry | Religious leaders | Rich people | Others |
|---|---|---|---|---|---|
| | 68% | | | 8% | 24% |

17. If you have got problems whose advise are you seeking?

| 1. | Husband | Husband & Wife | Parents | Chaudry | Other relatives | Nobody | Others |
|---|---|---|---|---|---|---|---|
| | 8% | 25% | | 8% | 8% | 25% | 26% |

About the education of their children.

18. Up to which grade do you think your children should be in the school?

| Don't know No answer | Highest possible | Professional | Higher | Matric | Primary | Depends on God |
|---|---|---|---|---|---|---|
| 17% | | | 58% | 17% | | 8% |

19. Reasons given for educating their children.

| Don't know No answer | Good life | Can't afford more | Others |
|---|---|---|---|
| 34% | 33% | 25% | 8% |

20. Ans wers given to the question (after the tests and the interview): "Why do you think we ask these questions?"

| Don't know No answer | Know the trend of mind | Test the intelligence | Others |
|---|---|---|---|
| 25% | | 17% | 58% |

---

1) Verses from the Koran (or something else written on a small piece of paper) or e.g. a piece of cloth from some holy man.

## ADULTS

Appendix 2h

## Adults. Primary Pass (3 Male, 11 Female)

N = 14

1. Average income: 92 RS/month (n = 5)
2. Average age: 30.0
3. Average no. of children: 2,9 (only those who have got children)

4. Longest journey:

| | None | Nearest town | Far off city | Abroad |
|---|---|---|---|---|
| 4. Longest journey: | 22% | 7% | 64% | 7% |

5. Geographical and political knowledge: 4,9 1)(Average)

6. Scientific knowledge (Why does the sun rise?)

| Don't know/Wrong | By God | Right |
|---|---|---|
| 29% | 64% | 7% |

Attitudes towards change.

7. Tell something you would like to change:

| | Don't know<br>No change | Be rich | Education | Impose Islamic system | Structural Changes | Peace | Others |
|---|---|---|---|---|---|---|---|
| a) In your own life | 79% | 14% | 7% | | | | |
| b) In your home | 71% | | | | | | 29% |
| c) In the location | 86% | | | | 14% | | |
| d) In the country | 64% | | | 7% | 22% | | 7% |
| e) In the world | 100% | | | | | | |

8. How can these things be changed?

| | No change<br>Don't know<br>No answer | By God | Education | Individual Efforts | Co-operation | Others |
|---|---|---|---|---|---|---|
| a) In your own life | 86% | | | 14% | | |
| b) In your home | 86% | 7% | | | | 7% |
| c) In the location | 100% | | | | | |
| d) In the country | 79% | 14% | | | | 7% |
| e) In the world | 100% | | | | | |

9. In a village usually some people are rich while others are poor

| Why is it so? | Don't know | Due to God | Education | Individual Efforts | Structural reasons/ | Others |
|---|---|---|---|---|---|---|
| | 7% | 86% | 7% | | | |

| How can that be changed? | Don't know<br>Impossible | Due to God | Education | Individual Efforts | Structural reasons/ changes | Others |
|---|---|---|---|---|---|---|
| | 7% | 36% | 7% | 30% | | |

10. Ideas about how people can cooperate in order to make things better.

| Don't know/ Impossible | Education | Individual efforts | Cooperation | OTHERS |
|---|---|---|---|---|
| 50% | 14% | | | 36% |

Norms people should follow.

11. What people should do to be a good member of the community.

| Don't know<br>No answer | Do good deeds | Get education | Help others | Obey the law/ Government/ Nation | Others |
|---|---|---|---|---|---|
| 29% | | 29% | 7% | | 35% |

12. What people should not do to be a good member of the community.

| Dont know<br>No answer | Stealing | Commit evils | Fighting | Others |
|---|---|---|---|---|
| 29% | 13% | 29% | 29% | |

---

1) Maximum 10 points for knowing the names of the Prime Minister and the countries which share borders with Pakistan and the names of the political parties in the country.

## Supernatural belief.

13. Do you agree to the following statements?

| | | Yes | No | Don't know |
|---|---|---|---|---|
| a) Children are gifts of God. Every child that takes birth brings his own Rizaq. So it is absolutely ridiculous to worry about the support of children or their increasing number. | | 79% | 14% | 7% |
| b) The way human beings will pass their lives on this earth and the pleasure and pains that they will experience, all has been decided by God long before their birth. Human efforts simply cannot change His decisions. | | 72% | 14% | 14% |
| c) A spell of an evil spirit (Charail or Bhoot) can never be undone with the medicines of a doctor. | | 50% | 50% | |
| d) Not only children but even objects and cattle are prey to the evil eye. All can be made sick or damaged by the simple gaze of the person possessing the evil eye. | | 64% | 29% | 7% |
| e) One can get rid of fever and other human ailments by the use of Taaveez.[1] | | 36% | 57% | 7% |
| | M | 60% | 33% | 7% |
| f) One should follow the acts of one's forefathers without examining their goodness or badness. | | 14% | 79% | 7% |
| | M | 56 | 40 | 4% |

## Influnce and power.

14. Who decides how many children there will be in a family?

| 1. Don't know No answer | 2. Husband | 3. Husband & Wife | God | Others |
|---|---|---|---|---|
| 14% | 7% | 21% | 58% | |

15. Who decides in your home?

| 1. | 2. | Parents | Mother & Father in law | Others | MYSELF |
|---|---|---|---|---|---|
| | 29% | 21% | 7% | 14% | 29% |

16. Who has got the greatest power or influence in your community.

| 1. | Political leaders | Chaudry | Religious leaders | Rich people | Others |
|---|---|---|---|---|---|
| 65% | 7% | 14% | 14% | | |

17. If you have got problems whose advise are you seeking?

| 1. | Husband | Husband & Wife | Parents | Chaudry | Other relatives | Nobody | Others |
|---|---|---|---|---|---|---|---|
| 7% | 37% | | 21% | 7% | 28% | | |

## About the education of their children.

18. Up to which grade do you think your children should be in the school?

| Don't know No answer | Highest possible | Professional | Higher | Matric | Primary | Depends on God |
|---|---|---|---|---|---|---|
| 22% | 14% | | 14% | 43% | 7% | |

19. Reasons given for educating their children.

| Don't know No answer | Good life | Can't afford more | Others |
|---|---|---|---|
| 43% | | 14% | 43% |

20. Ans wers given to the question (after the tests and the interview): "Why do you think we ask these questions?"

| Don't know No answer | Know the trend of mind | Test the intelligence | Others |
|---|---|---|---|
| 64% | 22% | 14% | |

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[1] Verses from the Koran (or something else written on a small piece of paper) or e.g. a piece of cloth from some holy man.

**ADULTS**

Appendix 2i

# Adults, Middle Passed (Male 9, Female 10)

N=19

1. Average income: 351 RS/month (n=10)

2. Average age: 29.0

3. Average no. of children: 2.8 (only those who have got children)

|  | None | Nearest town | Far off city | Abroad |
|---|---|---|---|---|
| 4. Longest journey: |  | 11% | 42% | 47% |

5. Geographical and political knowledge: 6.9 [1] (Average)

|  | Don't know/Wrong | By God | Right |
|---|---|---|---|
| 6, Scientific knowledge (Why does the sun rise?) | 31% | 53% | 16% |

Attitudes towards change.

7. Tell something you would like to change:

|  | Don't know<br>No change | Be rich | Education | Impose Islamic system | Structural Changes | Peace | Others |
|---|---|---|---|---|---|---|---|
| a) In your own life | 63% | 16% | 11% |  |  | 5% | 5% |
| b) In your home | 63% | 11% |  |  |  |  | 26% |
| c) In the location | 52% |  | 11% |  | 21% |  | 16% |
| d) In the country | 53% |  |  | 5% | 5% | 5% | 32% |
| e) In the world | 64% |  | 5% |  |  | 21% | 10% |

. How can these things be changed?

|  | No change<br>Don't know<br>No answer | By God | Education | Individual Efforts | Co-operation | Others |
|---|---|---|---|---|---|---|
| a) In your own life | 68% |  |  | 11% |  | 21% |
| b) In your home | 90% |  |  | 5% | 5% |  |
| c) In the location | 84% |  | 5% |  | 11% |  |
| d) In the country | 90% |  |  |  |  | 10% |
| e) In the world | 90% |  |  |  | 5% | 5% |

. In a village usually some people are rich while others are poor

|  | Don't know | Due to God | Education | Individual Efforts | Structural reasons/ | Others |
|---|---|---|---|---|---|---|
| Why is it so? | 10% | 63% |  | 27% |  |  |

|  | Don't know<br>Impossible | Due to God | Education | Individual Efforts | Structural reasons/ changes | Others |
|---|---|---|---|---|---|---|
| How can that be changed? | 16% | 48% | 5% | 21% | 5% | 5% |

0. Ideas about how people can cooperate in order to make things better.

| Don't know/ Impossible | Education | Individual efforts | Cooperation |
|---|---|---|---|
| 32% | 32% | 10% | 26% |

Norms people should follow.

1. What people should do to be a good member of the community.

| Don't know<br>No answer | Do good deeds | Get education | Help others | Obey the law/ Government/ Nation | Others |
|---|---|---|---|---|---|
| 4% | 26% | 4% | 15% | 4% | 47% |

2. What people should not do to be a good member of the community.

| Dont know<br>No answer | Stealing | Commit evils | Fighting | Others |
|---|---|---|---|---|
| 4% | 4% | 39% | 16% | 39% |

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[1] Maximum 10 points for knowing the names of the Prime Minister and the countries which share borders with Pakistan and the names of the political parties in the country.

### Supernatural belief.

13. Do you agree to the following statements?

| | | Yes | No | Don't know |
|---|---|---|---|---|
| a)Children are gifts of God. Every child that takes birth brings his own Rizaq. So it is absolutely ridiculous to worry about the support of children or their increasing number. | | 63% | 37% | |
| b)The way human beings will pass their lives on this earth and the pleasure and pains that they will experience, all has been decided by God long before their birth. Human efforts simply cannot change His decisions. | | 42% | 58% | |
| c)A spell of an evil spirit (Charail or Bhoot) can never be undone with the medicines of a doctor. | | 58% | 42% | |
| d)Not only children but even objects and cattle are prey to the evil eye. All can be made sick or damaged by the simple gaze of the person possessing the evil eye. | | 68% | 32% | |
| e)One can get rid of fever[1] and other human ailments by the use of Taaveez. | | 63% | 37% | |
| | M | 59% | 41% | |
| f)One should follow the acts of one's forefathers without examining their goodness or badness. | | 21% | 79% | |
| | M | 53% | 47% | |

### Influnce and power.

14. Who decides how many children there will be in a family?

| 1. Don't know No answer | 2. Husband | 3. Husband & Wife | God | Others |
|---|---|---|---|---|
| | 10% | 53% | 37% | |

15. Who decides in your home?

| 1. | 2. | Parents | Mother & Father in law | Others | MYSELF |
|---|---|---|---|---|---|
| 5% | 26% | 22% | 16% | 5% | 26% |

16. Who has got the greatest power or influence in your community.

| 1. | Political leaders | Chaudry | Religious leaders | Rich people | Others |
|---|---|---|---|---|---|
| 21% | 21% | | 16% | 10% | 32% |

17. If you have got problems whose advise are you seeking?

| 1. | Husband | Husband & Wife | Parents | Chaudry | Other relatives | Nobody | Others |
|---|---|---|---|---|---|---|---|
| | 5% | 5% | 38% | 5% | 20% | | 27% |

### About the education of their children.

18. Up to which grade do you think your children should be in the school?

| Don't know No answer | Highest possible | Professional | Higher | Matric | Primary | Depends on God |
|---|---|---|---|---|---|---|
| 21% | | 21% | 42% | 5% | 11% | |

19. Reasons given for educating their children.

| Don't know No answer | Good life | Can't afford more | Others |
|---|---|---|---|
| 57% | | 11% | 32% |

20. Answers given to the question (after the tests and the interview): "Why do you think we ask these questions?"

| Don't know No answer | Know the trend of mind | Test the intelligence | Others |
|---|---|---|---|
| 42% | 21% | 16% | 21% |

---

1)Verses from the Koran (or something else written on a small piece of paper) or e.g. a piece of cloth from some holy man.

ADULTS

Appendix 2j

# Adults. Matric Passed (Male 6. Female 9)

N=15

1. Average income: 356 RS/month

2, Average age: 27,5

3. Average no. of children: 3 (only those who have got children)

4. Longest journey:

| None | Nearest town | Far off city | Abroad |
|---|---|---|---|
|  |  | 93 | 7 |

5. Geographical and political knowledge: 7,5 [1] (Average)

6, Scientific knowledge (Why does the sun rise?)

| Don't know/Wrong | By God | Right |
|---|---|---|
| 53% | 40% | 7% |

Attitudes towards change.

7. Tell something you would like to change:

|  | Don't know No change | Be rich | Education | Impose Islamic system | Structural Changes | Peace | Others |
|---|---|---|---|---|---|---|---|
| a) In your own life | 51 % | 7% | 33% |  |  |  | 7% |
| b) In your home | 46 % | 27% | 7% |  |  | 7% | 13% |
| c) In the location | 33 % |  | 20 % |  | 13% |  | 33% |
| d) In the country | 26 % |  |  | 20% | 33% | 7% | 7% |
| e) In the world | 42 % |  |  |  | 28% | 26% |  |

8. How can these things be changed?

|  | No change Don't know No answer | By God | Education | Individual Efforts | Co-operation | Others |
|---|---|---|---|---|---|---|
| a) In your own life | 74 % |  |  | 20% |  | 7% |
| b) In your home | 86 % |  |  | 7% |  | 20% |
| c) In the location | 47% |  |  | 20% | 33% |  |
| d) In the country | 73% |  | 13% |  | 14% |  |
| e) In the world | 80 % |  |  |  | 14% |  |

. In a village usually some people are rich while others are poor

|  | Don't know | Due to God | Education | Individual Efforts | Structural reasons/ | Others |
|---|---|---|---|---|---|---|
| Why is it so? | 6 % | 46 % |  | 26 % | 13% | 6 % |

|  | Don't know Impossible | Due to God | Education | Individual Efforts | Structural reasons/ changes | Others |
|---|---|---|---|---|---|---|
| How can that be changed? | 32 % |  | 13% | 27% | 21% | 7% |

0. Ideas about how people can cooperate in order to make things better.

| Don't know/ Impossible | Education | Individual efforts | Cooperation |
|---|---|---|---|
| 14% | 47% | 13% | 2 % |

Norms people should follow.

1. What people should do to be a good member of the community.

| Don't know No answer | Do good deeds | Get education | Help others | Obey the law/ Government/ Nation | Others |
|---|---|---|---|---|---|
|  | 40% | 20% | 21% | 13% |  |

2. What people should not do to be a good member of the community.

| Dont know No answer | Stealing | Commit evils | Fighting | Others |
|---|---|---|---|---|
|  | 34% | 34% | 7% | 13% |

---

1) Maximum 10 points for knowing the names of the Prime Minister and the countries which share borders with Pakistan and the names of the political parties in the country.

## Supernatural belief.

13. Do you agree to the following statements?

| | Yes | No | Don't know |
|---|---|---|---|
| a) Children are gifts of God. Every child that takes birth brings his own Rizaq. So it is absolutely ridiculous to worry about the support of children or their increasing number. | 47% | 53% | |
| b) The way human beings will pass their lives on this earth and the pleasure and pains that they will experience, all has been decided by God long before their birth. Human efforts simply cannot change His decisions. | 33% | 67% | |
| c) A spell of an evil spirit (Charail or Bhoot) can never be undone with the medicines of a doctor. | 60% | 30% | |
| d) Not only children but even objects and cattle are prey to the evil eye. All can be made sick or damaged by the simple gaze of the person possessing the evil eye. | 60% | 30% | |
| e) One can get rid of fever and other human ailments by the use of Taaveez.[1] | 13% | 87% | |
| | 51% | 53% | |
| f) One should follow the acts of one's forefathers without examining their goodness or badness, | | 100% | |
| | 51% | | |

## Influnce and power.

14. Who decides how many children there will be in a family?

| 1. Don't know No answer | 2. Husband | 3. Husband & Wife | God | Others |
|---|---|---|---|---|
| | | | | |

15. Who decides in your home?

| 1. | 2. | Parents | Mother & Father in law | Others |
|---|---|---|---|---|
| | 27% | 53% | | 30% |

16. Who has got the greatest power or influence in your community.

| 1. | Political leaders | Chaudry | Religious leaders | Rich people | Others |
|---|---|---|---|---|---|
| 46% | 30% | | 7% | 7% | |

17. If you have got problems whose advise are you seeking?

| 1. | Husband | Husband & Wife | Parents | Chaudry | Other relatives | Nobody | Others |
|---|---|---|---|---|---|---|---|
| | 13% | 7% | 40% | | 14% | | 20% |

## About the education of their children.

18. Up to which grade do you think your children should be in the school?

| Don't know No answer | Highest possible | Professional | Higher | Matric | Primary | Depends on God |
|---|---|---|---|---|---|---|
| | | 27% | 61% | | | |

19. Reasons given for educating their children.

| Don't know No answer | Good life | Can't afford more | Others |
|---|---|---|---|
| 30% | 33% | | 20% |

20. Ans wers given to the question (after the tests and the interview): "Why do you think we ask these questions?"

| Don't know No answer | Know the trend of mind | Test the intelligence | Others |
|---|---|---|---|
| 20% | 33% | 20% | 27% |

---

1) Verses from the Koran (or something else written on a small piece of paper) or e.g. a piece of cloth from some holy man.

ADULTS

Appendix 2k

## Adults, Teachers (Male 13, Female 8)

N=21

1. Average income: 392 RS/month
2. Average age: 28,5
3. Average no. of children: 2,9 (only those who have got children)

| | None | Nearest town | Far off city | Abroad |
|---|---|---|---|---|
| 4. Longest journey: | | | 95% | 5% |

5. Geographical and political knowledge: ____________ [1] (Average)

| | Don't know/Wrong | By God | Right |
|---|---|---|---|
| 6. Scientific knowledge (Why does the sun rise?) | 57% | 24% | 19% |

Attitudes towards change.

7. Tell something you would like to change:

| | Don't know<br>No change | Be rich | Education | Impose Islamic system | Structural Changes | Peace | Others |
|---|---|---|---|---|---|---|---|
| a) In your own life | 43% | 5% | 19% | | | 5% | 29% |
| b) In your home | 11% | 5% | | | | | 10% |
| c) In the location | 57% | | 19% | 5% | 14% | | |
| d) In the country | 57% | | | 24% | 10% | | 10% |
| e) In the world | 17%<br>38% | | | 24% | | 10% | |

8. How can these things be changed?

| | No change<br>Don't know<br>No answer | By God | Education | Individual Efforts | Co-operation | Others |
|---|---|---|---|---|---|---|
| a) In your own life | 17% | | 10% | 10% | | |
| b) In your home | 90% | | | 10% | | |
| c) In the location | 76% | | 10% | 5% | 10% | |
| d) In the country | 62% | | 19% | | 15% | 5% |
| e) In the world | 86% | | 14% | | | |

9. In a village usually some people are rich while others are poor

| | Don't know | Due to God | Education | Individual Efforts | Structural reasons/ | Others |
|---|---|---|---|---|---|---|
| Why is it so? | 5% | 38% | 24% | 24% | 10% | |

| | Don't know<br>Impossible | Due to God | Education | Individual Efforts | Structural reasons/ changes | Others |
|---|---|---|---|---|---|---|
| How can that be changed? | 10% | 33% | 24% | 5% | 19% | 10% |

10. Ideas about how people can cooperate in order to make things better.

| Don't know/ Impossible | Education | Individual efforts | Cooperation |
|---|---|---|---|
| 15% | 80% | 5% | |

Norms people should follow.

11. What people should do to be a good member of the community.

| Don't know<br>No answer | Do good deeds | Get educa-tion | Help others | Obey the law/ Government/ Nation | Others |
|---|---|---|---|---|---|
| 4% | 19% | 8% | 44% | 15% | 10% |

12. What people should not do to be a good member of the community.

| Dont know<br>No answer | Stealing | Commit evils | Fighting | Others |
|---|---|---|---|---|
| 31% | 17% | 43 | 17 | 17% |

---

1) Maximum 10 points for knowing the names of the Prime Minister and the countries which share borders with Pakistan and the names of the political parties in the country.

## Supernatural belief.

13. Do you agree to the following statements?

| | Yes | No | Don't know |
|---|---|---|---|
| a) Children are gifts of God. Every child that takes birth brings his own Rizaq. So it is absolutely ridiculous to worry about the support of children or their increasing number. | 48% | 48% | 4% |
| b) The way human beings will pass their lives on this earth and the pleasure and pains that they will experience, all has been decided by God long before their birth. Human efforts simply cannot change His decisions. | 24% | 76% | |
| c) A spell of an evil spirit (Charail or Bhoot) can never be undone with the medicines of a doctor. | 67% | 29% | 4% |
| d) Not only children but even objects and cattle are prey to the evil eye. All can be made sick or damaged by the simple gaze of the person possessing the evil eye. | 67% | 33% | |
| e) One can get rid of fever[1] and other human ailments by the use of Taaveez. | 46% | 54% | |
| | 50% | 48% | |
| f) One should follow the acts of one's forefathers without examining their goodness or badness. | | 100% | |
| | 42% | 56% | 2% |

## Influnce and power.

14. Who decides how many children there will be in a family?

| 1. Don't know No answer | 2. Husband | 3. Husband & Wife | God | Others |
|---|---|---|---|---|
| | 14% | 30% | 46% | 10% |

15. Who decides in your home?

| 1. | 2. | Parents | Mother & Father in law | Others MYSELF |
|---|---|---|---|---|
| | 5% | 57% | 10% | 30 |

16. Who has got the greatest power or influence in your community.

| 1. | Political leaders | Chaudry | Religious leaders | Rich people | Others |
|---|---|---|---|---|---|
| | 43% | | 14% | 38% | 5% |

17. If you have got problems whose advise are you seeking?

| 1. | Husband | Husband & Wife | Parents | Chaudry | Other relatives | Nobody | Others |
|---|---|---|---|---|---|---|---|
| | 5% | | 38% | | 14% | | 14% |

## About the education of their children.

18. Up to which grade do you think your children should be in the school?

| Don't know No answer | Highest possible | Professional | Higher | Matric | Primary | Depends on God |
|---|---|---|---|---|---|---|
| 14% | | 24% | 38% | 10% | | |

19. Reasons given for educating their children.

| Don't know No answer | Good life | Can't afford more | Others |
|---|---|---|---|
| 38% | 43% | | 11% |

20. Answers given to the question (after the tests and the interview):

"Why do you think we ask these questions?"

| Don't know No answer | Know the trend of mind | Test the intelligence | Others |
|---|---|---|---|
| 19% | 50% | 15% | 15% |

---

[1] Verses from the Koran (or something else written on a small piece of paper) or e.g. a piece of cloth from some holy man.

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